

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. Contract ID Code Firm-Fixed-Price		Page 1 Of 36	
2. Amendment/Modification No. P00016		3. Effective Date 2001MAY30		4. Requisition/Purchase Req No. SEE SCHEDULE		5. Project No. (If applicable)	
6. Issued By TACOM AMSTA-LC-CLDA DOUGLAS W. CLEVELAND (810)574-6349 WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL EMAIL: CLEVELAD@TACOM.ARMY.MIL		Code W56HZV		7. Administered By (If other than Item 6) DCM BIRMINGHAM BURGER PHILLIPS CENTER 1910 THIRD AVE. NORTH, RM 201 BIRMINGHAM, AL 35203-2376		Code S0101A	
				SCD C PAS NONE ADP PT HQ0338			
8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code) METRIC SYSTEMS CORPORATION 645 ANCHORS STREET FORT WALTON BEACH 32548-0000 TYPE BUSINESS: Large Business Performing in U.S.				<input type="checkbox"/>		9A. Amendment Of Solicitation No.	
				<input type="checkbox"/>		9B. Dated (See Item 11)	
				<input checked="" type="checkbox"/>		10A. Modification Of Contract/Order No. DAAE07-00-C-M010	
				<input type="checkbox"/>		10B. Dated (See Item 13) 2000MAR20	
Code 12339		Facility Code					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing items 8 and 15, and returning _____ copies of the amendments: (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. Accounting And Appropriation Data (If required) NO CHANGE TO OBLIGATION DATA							
13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS							
KIND MOD CODE: C It Modifies The Contract/Order No. As Described In Item 14.							
<input type="checkbox"/>		A. This Change Order is Issued Pursuant To: The Contract/Order No. In Item 10A. The Changes Set Forth In Item 14 Are Made In					
<input type="checkbox"/>		B. The Above Numbered Contract/Order Is Modified To Reflect The Administrative Changes (such as changes in paying office, appropriation data, etc.) Set Forth In Item 14, Pursuant To The Authority of FAR 43.103(b).					
<input checked="" type="checkbox"/>		C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of: Mutual Agreement of the Parties					
<input type="checkbox"/>		D. Other (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the Issuing Office.							
14. Description Of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) SEE SECOND PAGE FOR DESCRIPTION							
Contract Expiration Date: 2007DEC31							
Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. Name And Title Of Signer (Type or print)				16A. Name And Title Of Contracting Officer (Type or print) FRANK A. RUZICKA RUZICKAF@TACOM.ARMY.MIL (810)574-7709			
15B. Contractor/Offeror (Signature of person authorized to sign)		15C. Date Signed		16B. United States Of America By _____ /SIGNED/ (Signature of Contracting Officer)		16C. Date Signed	
NSN 7540-01-152-8070 PREVIOUS EDITIONS UNUSABLE				30-105-02		STANDARD FORM 30 (REV. 10-83) Prescribed by GSA FAR (48 CFR) 53.243	

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SECTION A - SUPPLEMENTAL INFORMATION

MODIFICATION P00016

AMOUNT OF THIS MODIFICATION: \$0

Modification P00016 is issued to incorporate the following changes into the contract:

1. The maximum amount of time for Logistics Reviews, as shown in the next to last sentence of contract paragraph C.15.5, is hereby changed from 15 days to 20 days. This action is taken at no change in the contract amount.
2. Contract paragraph E.8.3.2 is hereby revised to change the contract paragraph called out for the Final Inspection Record in the second sentence from C.4.5 to C.4.4.3.
3. As a result of this modification, there is no change in the contract amount. All terms and conditions of the contract, other than those described above, remain unchanged.

C.15.5 LOGISTICS REVIEWS. The Contractor shall hold not more than four Logistics Reviews which will address LAV SLEP maintenance, provisioning, configuration management (CM) and TM data. The Contractor shall also address ILS program review and coordination issues in the agenda. Logistics Reviews shall be structured around complete assemblies. Logistics Reviews shall be scheduled to coincide with assigned deliveries of the TM and SL-4 for the items/assemblies being reviewed. The Government and Contractor shall review additions, modifications and deletions to TM and SL-4 pages. Each review shall not exceed 20 working days. The Contractor shall deliver the SL-4 data 30 days prior to the Logistics Review in accordance with ELIN A011.

E.8.3.2 Upon completion of the SLEP integration process, the contractor shall completely inspect and road test the LAV-25 prototypes vehicles (or other variants as required). Inspection shall be conducted in accordance with their Quality Assurance Program Plan (C.4.1) and the Final Inspection Record (C.4.4.3), at the contractor facilities prior to shipment to the Government test site. At least 20 calendar days prior to the inspection of the prototype vehicles, the contractor shall furnish written notice to the Procurement Contracting Officer or their representative of the time and location of the inspections so the Government may witness and participate in the inspections. At the time of inspections, the contractor's record of inspections and tests that were previously conducted on the vehicles and its components shall be made available for review by the Government representatives. All deficiencies detected by the contractor or Government and any corrective action taken shall be described in writing on the deficiency sheet attached to the FIR. The contractor shall correct all deficiencies detected by the Government on the LAV-25 prototypes (or other variants), supporting equipment and documentation prior to delivery to the Government test site.

*** END OF NARRATIVE A 016 ***

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

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SECTION C
DESCRIPTION/SPECIFICATIONS

NOTE: This section C is divided into three parts. Part One contains requirements that apply to both Phase I and Phase II. Part Two contains requirements that apply to the R&D phase, Phase I CLINS 1001AA through 1005AA, Part Three applies to the Production phase, Phase II (CLINS 2001AA through 5001AH).

SECTION C-PART ONE (applicable to Phases I and II)

C. 1 GENERAL

C.1.1 Light Armored Vehicle Service Life Extension Program (LAV SLEP) The Program Integration Contractor shall provide the necessary supplies and services required to upgrade and deliver the USMC fleet of LAVs in accordance with the Purchase Description (Attachment 1) and the other provisions of this contract.

C.1.2 Program Description.

C.1.2.1 The program goal is to ensure the LAV FOV continues to provide the USMC Commanders with a highly mobile, survivable and reliable combat system to conduct reconnaissance, security, economy of force, and limited offensive and defense missions through 2015. The LAV SLEP will do this by improving LAV survivability, sustainability, lethality, and mobility; improving the LAV FOV readiness; and reducing operations and support costs.

C.1.2.2 This contract consists of two phases: Phase I for Research and Development and Phase II for Production. Under the Phase I, the Program Integration contractor shall design, produce, and deliver five (5) modified Light Armored Vehicles (LAVs) meeting the requirements of the Purchase Description (PD). Four of the vehicles will be used in the Government's Development and Operational Testing (DT/OT). The fifth will be used to support Integrated Logistics Support (ILS) efforts. Phase II includes options for delivery of upgrade kits and integration of kits into the USMC FOLAV vehicles that may be exercised by the Government. Both phases include requirements for data and contractor support as identified in this contract.

C.1.2.3 Total System Responsibility. The contractor shall assume total system responsibility for the LAV SLEP program. Total system responsibility means that the contractor agrees to accept responsibility for providing vehicles incorporated with SLEP upgrades which meet the requirements of the Purchase Description, and that do not degrade from the current performance of the vehicles as set forth in the Family of Light Armored Vehicle Demonstrated Performance Specification (Annex 1 to Attachment 1). This responsibility includes items that are subcontracted and/or Contractor furnished and specified by the Government by manufacturer's name, item description, or part number. Contractor responsibility for GFE/GFM items is limited to any defects resulting from contractor integration of the item. The Contractor shall be responsible for Correction of Deficiencies (COD) as set forth in Section E; for ensuring on-time delivery of all hardware and data deliverables under this contract; and for managing the contract effort to achieve Cost As An Independent Variable (CAIV) goals (ref. C.8, C.18, C.28)

C.1.2.4 Coordination of Contractor and MARCORLOGBASE Depots. The Government currently has an Inspection and Repair Only as Necessary (IROAN) program for the LAV FOV that is being performed at the USMC Depots in Albany, GA and in Barstow, CA. The SLEP and IROAN efforts will be running concurrently, and will need to be coordinated (for those installations performed at the depots - see Section F) to minimize cost. "Coordination" in this usage refers to defining what effort will be performed by the Contractor under this contract, what effort will be performed by the Depots as part of IROAN, and how best to schedule the timing of these 2 efforts to maximize efficiency and reduce cost. Requirements for coordination of Depot and Contractor work efforts for Phases I and II are contained in this SOW.

C.2. Meetings/Conferences/Reviews.

C.2.1. The Contractor shall support the following meetings, conferences and reviews required in this scope of work. Persons who are subject matter experts and are familiar with the issues to be discussed shall attend. At least one representative each from the Contractor and the Government shall have authority to resolve issues raised at the meetings. Wherever possible, meetings shall be scheduled in tandem to minimize the use of personnel resources and travel expenses. Meetings shall include:

- Start of Work Meeting (C.2.2)
- Program Status Reviews (PSRs) (C.2.3)
- Preliminary Design Review (PDR) (C.12.1)
- In-Process Design Reviews (IPDR) (C.12.2)
- Critical Design Review (CDR) (C.12.3)
- Integrated Logistics Support (ILS) Start of Work Meeting (C.15.1)
- Logistics Reviews (C.15.5)
- Front End Analysis Team (FEAT) Reviews (C.15.3.1)
- Test Integrated Product Team (TIPT) Meetings (E.9.2.1)
- Scoring & Assessment Conferences (E.9.2.2)

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- Test Incident Report (TIR) Closeout Meetings (E.9.2.3)

C.2.1.1 AGENDAS. The Contractor shall submit an agenda and read-ahead package/briefing charts fifteen days prior to each meeting except for TIPT meetings, Scoring Conferences, Assessment Conferences and TIR Closeout meetings which will be chaired by the Government. All agendas shall be in Contractor format (ref. ELIN A001) and shall include, as a minimum: the location, date(s) and duration of each meeting; a daily chronological listing of each topic to be discussed, the time allotted for each and the name of the presenter; and a status (or list) of action items/problem issues identified at previous meetings.

C.2.1.2 MINUTES. The Contractor shall prepare and submit minutes within 10 days after each of meetings except for those meetings chaired by the Government as specified in C.2.3.2. All minutes shall be in Contractor format (ELIN A002) and shall include, as a minimum: Meeting location, date(s) and duration; list of attendees; a status of open action items/problem issues; list of new action items/problem areas, to include required resolution dates; summary of discussions.

C.2.2 Start of Work Meeting. A Start of Work (SOW) meeting shall be held at the Contractor's facility within 30 days after contract award. Discussions at the meeting shall include: the contractor's overall Program Management plan; the contractor's schedule for the Phase I effort; the contractor's initial Manufacturing Plan; risk areas and mitigation plans; and other technical area requirements, such as Logistics and Quality Assurance.

C.2.3. Program Status Reviews (PSRs). PSR meetings shall be held quarterly at the contractor's facility. The initial PSR shall be held NLT 150 DAC. The purpose of these meetings is to review cumulative performance and assess status in such areas as engineering design, quality assurance, schedules, ILS data development, and program management. The meetings will be oriented toward keeping top management of the contractor and the Government informed of progress to date, and of actual or potential schedule, cost, technical or administrative problems. The duration of the meetings should not exceed one (1) day each.

C.3 MANUFACTURING PLAN. The manufacturing plan submitted as part of the Contractor's proposal is incorporated herein by reference and shall be updated within 120 days after contract award to reflect any changes made in the plan since the proposal was submitted. The following factors, at a minimum, shall be addressed in the updated plan: production process planning, identification of the production process sequence and critical control points, the interrelated lead-times between the control points, manpower utilization, tooling and facilities plans, current and expected workload during the SLEP performance period, subcontracting plan and the material requirements planning process to be used. Further updates will be required if any of the critical process characteristics are changed as a result of the planning process. Examples of such changes are: changing a critical process method, changing the subcontracted effort, changing the share of work performed at subcontractors, depot or the system integrator. The plan shall also address plans for installation of kits in accordance with both option approaches (see C.21).

C.4 QUALITY ASSURANCE

C.4.1 QUALITY ASSURANCE PROGRAM PLAN (QAPP). The contractor shall establish, implement, document and maintain a quality system that ensures conformance to contractual requirements. The contractor shall implement the requirements of ANSI/ASQC Q9001, ISO 9001 or an equivalent quality system model; no third party certification is required. The Contractor shall make their Quality Assurance Program Plan or Quality Manual (whichever document they've developed as required by their ANSI, ISO, or equivalent quality system - development of a Government unique document is not required) available for Government review at their facility as required. The Contractor shall implement the plan/manual within 120 days after award, and shall update as required throughout the SLEP program.

C.4.2 CRITICAL SAFETY ITEM PROGRAM.

C.4.2.1 DEFINITIONS. The following definitions apply:

C.4.2.1.1 CRITICAL SAFETY ITEM (CSI). A CSI is a part, assembly, and/or installation or production system with one or more critical characteristics that, if not conforming to the design or quality requirements, would result in an unsafe condition. Unsafe conditions include conditions, which would cause loss or serious damage to the end item or major components, loss of control, or serious injury to personnel.

C.4.2.1.2 CRITICAL SAFETY CHARACTERISTICS. Any feature (i.e., tolerance, finish, material composition, manufacturing or assembly or inspection process) of product, material, or process, which, if nonconforming or missing, would cause the failure or malfunction of the critical item.

C.4.2.2 The Contractor shall implement a program to identify Critical Safety Items (CSIs) contained in the final LAV SLEP Vehicle Upgrade.

C.4.2.2.1 The Contractor shall develop Contractor Inspection Requirements (CIRs), i.e., Contractor in-process inspection procedures and Final Inspection Record (FIR) procedures, for all CSIs. CSIs shall require 100 percent inspection or monitoring through either Statistical Process Control (SPC) if utilized, applicable Quality Assurance Procedures (QAPs), or CIRs.

C.4.2.2.2 All drawings developed for SLEP that are identified as a CSI shall be clearly identified as a CSI on the engineering top drawings, part drawings, and/or assembly drawings.

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C.4.2.2.3 The Contractor shall validate the requirements pertaining to CSIs to ensure that all critical safety aspects of the design are accurately reflected, that parts/materials operate below fatigue limits/stress levels, and that the design allows for assessment by nondestructive inspection. The Contractor's validation must be based on engineering analysis of the CSI characteristics and should consider changes/deterioration through time or use, fatigue life, and operational conditions and environment.

C.4.3 LAV WELDING PROCEDURES. Any welding performed on the hull or turret (High Hard Steel and Rolled Homogeneous Armor plates) which may be required as a result of SLEP integration shall be accomplished in accordance with the requirements of TM 08594A-25/1 (Welding Procedures for Light Armored Vehicle). A copy of TM 08594A-25/1 shall be provided to the contractor as Government Furnished Information (Attachment 2).

C.4.3.1 WELDER AND WELDING OPERATOR CERTIFICATION. As a minimum for determining welder qualification, any welder assigned to manual welding work covered by this contract shall be qualified per the requirements of AWS D1.1, "Structural Welding Code (Structural Steel)".

C.4.3.1.1 The Contractor may substitute its current method of welder certification in lieu of the above stated code as long as the qualification procedures are equivalent to the above stated code. The Contractor shall be responsible for determining that automatic welding equipment operators are capable of consistently producing quality welds in accordance with the contractor's prepared WPS. The Contractor shall make available to the Government upon request, during the course of the contract, all welder certification documentation to verify compliance.

C.4.4 CONTRACTOR TESTING AND TEST REPORTING.

C.4.4.1 INTEGRATED TEST PLAN. The contractor shall develop an Integrated Test Plan (ITP) that identifies all developmental and qualification testing to be conducted by the contractor and/or subcontractor(s) necessary to accomplish acceptance of the LAV SLEP end item design. The ITP shall also include a tentative schedule and proposed test location of all contractor/subcontractor(s) testing so that the Government can plan to attend and witness these test events as required. The initial ITP shall be prepared in contractor format and submitted to the Government no later than 90 DAC in accordance with ELIN A004. The contractor shall update the ITP as required and notify the Government at least 14 working days prior to any test event in accordance with ELIN A004, so that the Government can make arrangements to witness contractor testing when required.

C.4.4.2 The contractor shall prepare a test report, in contractor format, for each contractor test event conducted on systems, subsystems, components and parts. The contractor shall submit these test reports to the Government in accordance with ELIN A005.

C.4.4.3 FINAL INSPECTION RECORDS (FIRS). Requirements for FIRS under each of the Phases are outlined in Parts Two and Three of this Section C respectively. (ELINs A006/B006).

C.5 INTEGRATED LOGISTICS SUPPORT (ILS).

C.5.1 ILS PROGRAM.

The Contractor shall conduct an ILS program in order to plan, manage, validate, execute and deliver logistical data and services for the SLEP Program. The objectives of ILS are to optimize material readiness; provide cost effective logistics support; and identify/evaluate resources required to develop, acquire and manage SLEP modifications throughout the LAV family of vehicles (FOV) service life. The Government and Contractor shall evaluate logistics data to support those objectives.

C.5.1 TECHNICAL MANUALS (TMs). TMs developed under this contract shall be prepared and delivered in accordance with the Technical Manual Contract Requirements (TMCR), Attachment 4.

C6. CONFIGURATION MANAGEMENT (CM).

C.6.1 Definitions of Configuration Management Terms are provided in Attachment 12.

C.6.1.1 DEFINITIONS AND USER PROCEDURES: Multi-User Engineering Change Proposal Automated Review System (MEARS), see paragraphs 5.3.6 and 5.4 in Attachment 9.

C.6.1.2 CM PROGRAM REQUIREMENTS. The Contractor shall establish a CM program defining the management system for configuration identification, configuration control, accountability for configuration changes and configuration audits. The Contractor is responsible for CM on SLEP generated changes to vehicle components, to include work performed by subcontractor(s). Contractor CM addresses SLEP modifications to all vehicle variants. The Government will retain responsibility for CM over the entire vehicle fleet.

C.7 PARTNERING. In an effort to effectively accomplish the objectives of this contract, the Government, Contractor, and major Subcontractors shall engage in the Partnering Process for the SLEP Program. Participation in the Partnering process is based upon mutual commitment between the Government and the Contractor(s) to work cooperatively as a team to identify and resolve problems and facilitate contract performance. The intent of the partnering process is a commitment for the parties to agree to work together as a team to expeditiously solve problems as they occur, to communicate effectively, and to avoid surprises.

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C.7.1 The primary objective of the Partnering process is to provide the Marine with the highest quality supplies/services on time and at a reasonable price. Partnering requires the parties to look beyond the strict bounds of the contract in order to formulate actions that promote common goals and objectives between the Government and the contractor.

It is a relationship that is based upon open and continuous communication, mutual trust and respect, and the replacement of the "us vs. them" mentality of the past with a "win-win" philosophy for the future. Partnering also promotes synergy, creative thinking, pride in performance, and the creation of a shared vision for success. The SLEP Partnering process will be based on the AMC Model Partnering Process, as well as the principles and procedures set forth in the AMC Partnering Guide (see document at web site http://www.amc.army.mil/amc/command_counsel/partnering.html).

C.7.3 The establishment of this Partnering Process does not affect the legal responsibilities or relationship of the parties, and cannot be used to alter, supplement, or deviate from the terms of the contract. Any changes to the contract must be executed in writing by the Contracting Officer. If the Contractor's proposal included a plan for co-location in PM-LAV, then the Contractor shall work with PM-LAV to finalize requirements for this co-location, and shall effect co-location in accordance with this agreement, and their proposal.

C.7.4 Executive Workshop. Within 30 days after contract award, Government and Contractor senior executives/managers shall attend an Executive Partnering Workshop. This shall be a one-day event, hosted by a third party facilitator. The purpose of this workshop is to establish lines of communication between upper management in both parties, and ensure their commitment to the Partnering Process. The product of this meeting shall be an overarching Partnering agreement/charter for the SLEP program, including designation of senior-level and program-level "Champions". The "Champions" will be responsible for overseeing the project, enforcing the team approach, overcoming resisting forces, participating in the resolution of issues escalated to their level, celebrating successes, and maintaining a positive image for the project. The parties shall mutually agree upon the location of the workshop; however, the location must be at a neutral site, to minimize work distractions

C.7.5 Team Workshop. Within 60 days after contract award, the Government and Contractor teams shall participate in a Partnering Workshop. This event shall run no more than 3 days, hosted by a third party facilitator. The parties shall mutually agree upon the location of the workshop; however, the location must be at a neutral site, to minimize work distractions. The purpose of the meeting is to conduct team building between the Government/Contractor team members, and establish lines of communication. Products of the meeting shall include:

- The SLEP Partnering Charter (mission statement, goals, and objectives).
- The SLEP Risk Management Plan, identifying specific program risk areas, with a risk mitigation plan and Government/Contractor action officers for each.
- Conflict escalation procedure (identifies methods of elevating disagreements for resolution within the Government and contractor organizations).
- Alternative Dispute Resolution (ADR) approach.
- Metrics for accomplishments of objectives.
- Reinforcement Techniques.
- Clear identification of roles and responsibilities for the team members.

C.7.6 Follow-Up Actions. The parties shall report status of risk items and partnering issues at Program Status Reviews (PSRs, ref. C.2.3). Joint reporting by Government and Contractor action officers is expected. In addition, the Government/Contractor shall meet periodically (approximately every 3 months, unless more frequent meetings are required and mutually agreed upon) to review and update the Partnering Charter, Risk Management Plan, and other Partnering documents. The parties may decide to include a facilitator at these meetings to reinforce teaming between the parties.

C.8 COST AS AN INDEPENDENT VARIABLE (CAIV). The CAIV goals for the SLEP program are as follows:

Development Cost Objective:	\$4,273,194
Design to Unit Cost Production	
Cost (DTUPC) Objective:	See Below
LAV-25	\$64,534
LAV-CC	\$55,261
LAV-AT	\$57,003
LAV-L	\$54,836
LAV-M	\$56,743
LAV-R	\$55,405
LAV-MEWSS	\$68,752
LAV-AD	\$59,895

The Government and Contractor shall work together to define CAIV goals for O&S cost and disposal cost for the SLEP upgrades. The Contractor's CAIV Plan submitted with its proposal is incorporated herein by reference. The Contractor shall manage the SLEP program to ensure that the program CAIV goals are achieved.

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* The Contractor shall identify proposed Development Cost and DTUPC objectives in its proposal. These amounts shall be no greater than the proposed total Phase I CLIN amounts for the Development Cost Objective, and no greater than the vehicle variant share of the unit price for the proposed, total production option ceiling prices for the DTUPC objectives (e.g. the total for kit option plus integration option CLINs for each variant on a per unit basis); and should, in fact, be less, as they should reflect "stretch goals" the Contractor will try to achieve. The Contractor's CAIV plan (ref L.3.3.2) should include rationale and supporting documentation for proposed objectives.

C.8.1 SPECIAL PROVISION REGARDING SLEP DESIGN DECISIONS AND THE COST-AS-AN-INDEPENDENT-VARIABLE (CAIV) PROGRAM

C.8.1.1 It is mutually understood and agreed that critical decisions made by the Contractor in designing the LAV SLEP upgrades will be based upon the results of the cost/performance trade-off analyses, as required by the contract CAIV requirements. It is further recognized that situations may occur in which such trade-off analyses clearly indicate the desirability of design decisions which could significantly increase the Contractor's costs of performance during the Prototype Development Phase (Phase I) and/or the Production Phase (Phase), but result in substantially greater long-term benefits to the Government.

C.8.1.2 In recognition of the above, the parties agree that whenever the Contractor shall consider making a design decision which the Contractor reasonably expects to significantly increase its costs of certain Phase I or Phase II effort over the estimated costs included by the Contractor for such effort (e.g. the target cost for Phase I and/or the production ceiling price(s) for Phase II), and the Government has concurred with the proposed design decision, the Contractor may submit to the Contracting Officer:

1. The Contractor's estimated Phase I and/or Phase II costs to implement the contemplated design decision, with supporting documentation;
2. The Contractor's estimate of Phase I and/or Phase II costs for other acceptable design alternatives;
3. The detailed basis for the Contractor's estimate for the effort contained in its initial SLEP Cost Proposal;
4. The Contractor's assessment of the anticipated long-term benefits to the LAV Program associated with the design decision (including projected reductions in total ownership cost, and in particular O&S costs); and
5. any additional supporting documentation requested by the Contracting Officer.

C.8.1.3 Upon consideration of the above information, if the Government determines that the overall, long-term benefits substantially outweigh the additional costs to be incurred by the Contractor, the contract will be equitably adjusted to reflect the Contractor's anticipated increase in Phase I and/or Phase II costs resulting from said design decision.

C.8.1.4 It is understood and agreed that no request for equitable adjustment hereunder will be considered unless the Contractor's proposed design decision was received and concurred in by the Government prior to effecting the design decision. Government approval of the proposed adjustment is contingent upon the Contractor verifying that the basis for the proposed adjustment is due to a CAIV-based design decision NOT initially addressed in the contract proposal, and is not due to underestimated cost/price (e.g. overrun). It is further understood and agreed that, with regard to any design decision for which an equitable adjustment is made pursuant to this clause, the Contractor shall not be entitled to submit any subsequent change proposals pursuant to the clause of this contract entitled "VALUE ENGINEERING (MAR 1989), FAR 52.248-1.

C.8.1.5 The Contractor further agrees that decisions regarding equitable adjustments to the contract under this clause are within the sole discretion of the Government. Accordingly, any decision(s) by the Government that the Contractor shall not be entitled to an equitable adjustment hereunder with regard to any contemplated design decision(s) shall not be subject to the provisions of the clause of the Contract entitled "DISPUTES - ALTERNATE I (DEC 1991)," FAR 52.233-1, and the Contractor hereby releases the Government from all liability and forever waives any actual or potential entitlement to any equitable adjustment in the price (cost and fee/profit) and/or delivery schedule of this Contract as a result of any such decision(s).

C.9 INTEGRATED DATA DIGITAL ENVIRONMENT (IDE) Electronic Access to Data. Unless otherwise specified, all data deliverables shall be in provided in digital format in accordance with the formats specified in the LAV Government Concept of Operations (GCO) (Attachment 9). For reports that are delivered on a frequent (monthly or bi-monthly basis), it is preferable that the Contractor provide the Government access to its data on-line through a Contractor Integrated Technical Information System (CITIS) that interfaces with PM-LAV's Integrated Digital Environment (IDE). If a CITIS is used, the Contractor shall be responsible for developing report templates that comply with the requirements for those ELINs/Data Items, and for ensuring that the data is updated by the required delivery date for those ELINs/Data Items.

C.10 Environmental, Safety & Health (ES&H). The Contractor shall use sound safety engineering practices in the SLEP program, including, but not limited to, the following (Note that the requirements of this section apply only to new or modified components affected by the SLEP and current vehicle components/systems that are affected by integration of SLEP upgrades):

- Identifying system hazards by conducting safety analyses and hazard evaluations. The analyses shall include both operational and maintenance aspects of the vehicle.

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- Controlling or minimizing hazards to personnel or the environment that cannot be avoided or eliminated.
- Ensuring all moving parts, mechanical power transmission devices, exhaust system components, pneumatic components and hydraulic components which present a hazard to personnel, are either enclosed or guarded. Protective devices shall not impair operational functions.
- Ensuring that suitable warning and caution notes are included in operation, maintenance, assembly and repair instructions and that distinctive markings are placed on hazardous components or equipment.
- Tracking hazards until they are eliminated or adequately controlled.
- Documenting the actions taken to eliminate a hazard or reduce the risk of its occurrence.
- Eliminating or reducing hazards through design; thus minimizing any potential retrofit actions.
- Ensuring the severity of personnel injury or equipment damage is minimized in the event of a mishap.

General Requirements. The contractor shall comply with the Occupational Safety and Health Administration (OSHA) regulation and applicable state and local regulation. The contractor shall identify the general procedures for disposition and disposal of hazardous waste generated for this effort. The contractor shall comply with the applicable federal, state and local statutes and regulation relating to protection of the environment and public safety and health. Environmentally preferable, recycled, or recovered materials shall be used to the maximum extent possible in the SLEP upgrades or procurement/manufacture of unique parts provided that the material meets or exceeds the operational and maintenance requirements of the FOLAV.

C.10.1 HAZARD TRACKING. The Contractor shall develop a method or procedure to document and track hazards from identification until the hazard is eliminated or the associated risk is reduced to a level acceptable to the Government. A central file or document called a "Hazard Log" shall be maintained. The Hazard Log shall contain as a minimum:

- A description of each hazard, to include cause, possible effect and hazard category.
- Status of each hazard.
- Traceability of the resolution action on each hazard from the time the hazard was identified to the time the risk associated with the hazard was reduced to a level acceptable to the Government.
- All hazards identified through testing and other analyses.

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C.10.1.1 HAZARD LOG. The definitions of Severity Categories and Probability Levels identified in Tables 1 and 2 below shall apply when determining whether a hazard must be identified on the Hazard Log.

TABLE 1 - HAZARD SEVERITY CATEGORY

DESCRIPTION	CATEGORY	DEFINITION
Catastrophic	I	Death, system loss or severe environmental damage
Critical	II	Severe injury, severe occupational illness or major system or environmental damage.
Marginal	III	Minor injury, minor occupational illness or minor system or environmental damage.
Negligible	IV	Less than minor injury, less than minor occupational illness or less than minor system or environmental damage.

TABLE 2 - HAZARD PROBABILITY LEVELS

DESCRIPTION	LEVEL	SPECIFIC ITEM/COMPONENT	WITHIN THE VEHICLE FLEET
Frequent	A	Hazard is likely to occur frequently.	Hazard will be experienced continuously.
Probable	B	Hazard will occur several times in the live of the item or component.	Hazard will occur frequently
Occasional	C	Hazard likely to occur some time in the life of the item or component.	Hazard will occur several times
Remote	D	Hazard unlikely, but could possibly occur in the life of the item or component.	Hazard is unlikely, but can reasonably be expected to occur.
Improbable	E	Hazard is so unlikely, it can be assumed not to occur.	Hazard is unlikely, but can possibly occur

C.10.1.2 All hazards identified with the following combination of Severity Categories and Probability Levels shall be included on the Hazard Log:

- Category I; Levels A through E
- Category II; Levels A through D
- Category III; Levels A through C
- Category IV; Level A

C.10.1.3 The Hazard Log shall be presented at each monthly In-Process Design Review (ref. C.12.2). During the first review, the Contractor shall present the complete Hazard Log. At subsequent reviews, the Contractor need only report on changes, updates, or closeout actions since the previous review.

C.10.1.4 DISPOSITION AND CLOSEOUT. All hazards must receive final disposition by the Government. The Government and the Contractor shall mutually agree as to whether a hazard requires a redesign; however, any redesign required due to a hazard shall be performed at no cost to the Government, and the adequacy of the design change shall remain the responsibility of the contractor. All hazards closed out in the log shall contain the signature of the Government official who authorized the closeout, his or her organization, and the date the closeout was authorized. Government signature authority to closeout a hazard shall be based on Table 3 below.

TABLE 3 - HAZARD APPROVAL LEVELS			
RISK ASSESSMENT CATEGORY	CLOSEOUT AUTHORITY	RISK LEVEL	CORRECTIVE ACTIONS
I A, B, C	PM-LAV USMC	Unacceptable	Mandatory
II A, B	Program Mgr		
III A	For all categories		
I D	USMC Prog Mgr	Undesirable	Mandatory-
II C	USMC Prog Mgr		Unless
II D	Govt. Team Leader		requirement is
III B, C	Govt. Team Leader		waived by the
			Customer
I E	Govt. Team Leader	Acceptable -	Possible-based
IV A	Govt. Team Leader	with	on customer
		Customer	review
		review	
All other Categories	Not required	Acceptable	Not Required

C.10.1.5 UPDATES. The hazard log shall be updated upon identification of each new hazard. The Government reserves the right to require the addition of items to or modifications to the Hazard Log.

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SECTION C - PART TWO - APPLICABLE TO PHASE I R&D

C.11 Contractor and MARCORLOGBASE Depots SLEP Coordination Efforts - Phase I. Within 30 days after contract award, the Contractor shall meet with PM-LAV, MARCORLOGBASEs, and/or the field unit representatives to discuss how best to coordinate Phase II installation. The parties shall review the most efficient timing of SLEP tasks, in order to minimize schedule risk and maximize overall process efficiency. This review shall include any work proposed by the contractor to be shifted to the Depot. Within 90 days after the meeting, the Contractor shall submit an updated Manufacturing Plan (ref. C.3 and ELIN A003) reflecting agreements reached at the meeting. This document shall help the Government and contractor do initial forward planning for the Production phase. The Contractor shall continue to monitor this plan through Phase I, and provide any required modifications (based on the ongoing development effort) to the Government.

C.11.1 Vehicle Configuration - Phase I. The Government will provide the contractor with five (5) LAV-25s for the prototype development effort. These vehicles shall be complete vehicles that have gone through the Depot IROAN process. The configuration of these vehicles shall be in accordance with the LAV Auto/Hull Inspection Checklist as provided as GFI (Attachment 2). Offerors are encouraged to propose alternative vehicle configurations that would result in saving time and preparation costs.

C.11.2 Transportation. The Government shall be responsible for shipping the five (5) GFE LAV-25s to the contractor's facility within 30 days after contract award.

C.12 MEETINGS/CONFERENCES/REVIEWS

C.12.1 Preliminary Design Review. The Contractor shall conduct a Preliminary Design Review at its facility within 90 days after contract award. The purpose of this review is to assess the Contractor's efforts towards meeting applicable contract requirements, including all of the requirements of the SLEP PD. The total time to conduct the PDR is approximately three (3) workdays.

C.12.1.1 Level of Review. The PDR is a working level Government and Contractor personnel meeting to discuss details pertaining to hardware systems/components and software. The purpose of the PDR is to:

- a. Determine that the detail design of the SLEP satisfies the performance and functional requirements of the PD.
- b. Establish the detail design compatibility among the SLEP LAV(s) systems and sub-systems.
- c. Assess risk areas in terms of cost, schedule, and performance.
- d. Analyze the results of the producibility analyses conducted on system hardware.
- e. Review the hardware product specifications.
- f. Present and review schedule for design and prototype effort.

C.12.1.2 Topics/Agenda. The primary focus of the PDR is to discuss technical information related to major systems, subsystems, and critical components/items. Topics for the PDR include, but are not limited to:

- a. Hardware.
 - Provide details on the adequacy of the detail design to meet the PD requirements.
 - Present detail engineering drawings including schematic diagrams as necessary.
 - Examine mock-ups, breadboards, prototype and developed hardware as appropriate.
 - Review corrosion control/prevention considerations to ensure proper materials have been chosen for the USMC operating environment.
 - Compare detailed block diagrams, schematics and logic diagrams with interface control diagrams to determine system compatibility.
- b. Design Reliability.
 - Compare hardware reliability predictions against specified requirements.
 - Discuss parts/items with minimum life or requiring special considerations to ensure minimal effect on system performance.
 - Discuss the specified test requirements to ensure a mutual understanding of the test plans and to provide overall planning information to the activities concerned.
 - Review failure data reporting and methods of determining failure trends.
 - Review all diagnostic programs and support equipment for compliance with the system maintenance concept and specified requirements.
- c. Design Maintainability.
 - Review the most recent quantitative hardware predictions. Compare to specified requirements.
 - Evaluate preventive maintenance frequencies and durations against overall system requirements.
 - Ensure the system is optimized from a maintenance and maintainability

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- viewpoint.
- Demonstrate that items are placed such that so there is sufficient space to use test equipment and tools without difficulty.
- d. Human Factors.
 - Analyze the vehicle system to determine that it meets human performance requirements and accepted human engineering practices.
 - Discuss any forced trade-offs in the design.
- e. System Safety.
 - Review results of safety tests.
 - Review known areas of special interest, such as fuel handling, high voltage protection and fire protection.
 - Review the detail design for compliance with safety design requirements.
 - Evaluate the detailed design for safety and protective equipment/devices.
 - Provide details on acceptance test requirements to ensure adequate safety requirements.
 - Review results of the Contractor's Critical Safety Item Program.
- f. Test.
 - Compare PD test requirements to the vehicle design.
 - Review hardware quality assurance provisions, qualification requirements and certification requirements for completeness and technical accuracy.
 - Review all test documentation, test data, and test schedules.
 - Inspect any available breadboards, mock-ups or prototype hardware.
 - Review prototype, mock-up or developmental model test results for compliance with specified requirements.
- g. Maintenance and Maintenance Data.
 - Evaluate the adequacy of maintenance plans.
 - Describe the system maintenance concept for the impact on design and support equipment (covering all maintenance echelons).
 - Define each subassembly or component to the third indenture level of the Work Breakdown Structure.
 - Identify the proposed maintenance plan for items down to the fifth indenture level.
- h. Software (if applicable).
 - Identify any planned software testing.
 - Review all the Computer Software Configuration (CSCI) requirements. Include discussion on functional flow, storage allocation, CSCI structure, security, software development, development tools, descriptions, and characteristics of commercial resources utilized, software/firmware support resources required during operational deployment, existing documentation, and memory reserve capacity.
 - Review the software configuration management process.
 - Present all known or anticipated software problems.
 - Review all results of software testing.
- i. Cost as an Independent Variable (CAIV).
 - Review the design in terms of capability of meeting contract CAIV goals.
 - Review any trade-offs made to reduce Life Cycle Cost (LCC).
- j. Logistics/Supportability
 - Review the design in terms of logistics considerations.
- k. Producibility
 - Review the design in terms of capability to produce/manufacture/integrate in order to meet the production delivery schedule.
 - Review plans for integrating contractor production efforts with Depot IROAN efforts.

C.12.2 IN-PROCESS DESIGN REVIEWS DURING PHASE I. The Contractor shall conduct in-process design status reviews at its facility (or an agreeable subcontractor's facility.) The IPDRs shall be held, first within 45 to 60 DAC, and at the Government's discretion, at

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monthly intervals thereafter until start of production. The purpose of these informal design reviews will be to assess the Contractor's ongoing effort to meet the requirements of the Purchase Description and this SOW. The focus at each IPDR will be on design progress since the last IPDR, especially with regard to the topics enumerated in the preceding paragraph C.12.1.2. At each review, the Contractor shall report on Hazard Tracking (ref C.10.1). The Contractor shall identify any new support items and the operational impacts that these items have on the system. Discussion shall include reasoning/factors (i.e. reliability, cost, supportability) for the selection decision. The Contractor shall also discuss the analysis of problem areas, evaluation of schedules, all risk areas and risk mitigation efforts, and progress toward achieving CAIV goals. Once a quarter, the Contractor shall dedicate a portion of the review to providing software status (if applicable).

C. 12.3 Critical Design Review (CDR)., The CDR will be held between five and eight months after contract award. This formal review shall be at the level of, conducted in the manner of, and cover the range of topics of the Preliminary Design Review (PDR) per paragraph C.12.1. However, the CDR is intended to be a comprehensive and detailed design review in which the contractor presents to the government a design essentially complete (i.e., ready to be built and tested).

C.13 PROGRAM PLANNING SCHEDULE. The Contractor shall provide a detailed program planning schedule, outlining its plans for meeting the required delivery schedules for the hardware and data under the development phase. The schedules(s) shall identify all work events that are required to achieve the required delivery dates. The schedule(s) shall clearly identify the critical path. The data shall be delivered in accordance with ELIN A009.

C.14 QUALITY ASSURANCE- Phase I

C.14.1 FINAL INSPECTION RECORD (FIR) PHASE I (R&D). The contractor shall be provided a copy of the LAV-25 (MC) Automotive/Hull Inspection Checklist as Government Furnished Information (GFI), see Attachment 2, in order to conduct the incoming inspection on the GFM LAV-25 prototypes (E.8.3). Using the inspection checklist as a guide, the contractor shall then develop a LAV-25 (SLEP) FIR (in contractor format) that will provide inspection criteria for accepting the upgraded LAV-25 SLEP prototype vehicle configuration. The FIR shall contain inspection criteria for all the characteristics outlined in the LAV Purchase Description, Table I for Quality Conformance Inspection (QCI). The FIR shall be formatted to follow an inspection sequence such as 1) Front of Vehicle; 2) Engine Compartment; 3) Curbside of Vehicle; 4) Rear of Vehicle; 5) Top of Vehicle; 6) Roadside of Vehicle; 7) Vehicle Interior; 8) Driver's Compartment; 9) Road Test requirements. The FIR shall also include a deficiency sheet with space to document the corrective action taken. The FIR shall be provided to the Government prior to acceptance inspection of the first LAV-25 SLEP prototype vehicle for review in accordance with ELIN A006. The FIR shall then be updated to reflect any configuration changes resulting from DT/OT.

C.15 INTEGRATED LOGISTICS SUPPORT (ILS)- Phase I

C.15.1 ILS START OF WORK (SOW) MEETING. The Contractor shall conduct an ILS SOW meeting NLT 30 days after contract award. The ILS SOW meeting shall last no longer than 2 days. The Contractor shall at a minimum, brief schedules and key ILS milestones for the program. Additional topics/processes to be discussed include, but are not limited to:

- a. Maintenance planning
- b. Contractor support requirements for DT/OT and production tests
- c. Support Equipment (SE) and Test Measurement and Diagnostic Equipment (TMDE) development and identification
- d. TM publication development process
- e. Logistics Reviews:
 - Dates and locations
 - Availability of SLEP Items, common tools, special tools, TMDE, support equipment and bulk items/expandable items
 - Technical data support (provisioning data, technical manuals, engineering data for provisioning (EDFP), etc)
 - Computer support
- f. USMC Maintenance facilities
- g. Design influence and integration efforts with System Engineering
- h. Packaging, Handling, Storage, and Transportation (PHS&T)
- i. Configuration Management
- j. Recommended Repair Parts List (RRPL) generation
 - k. Training plan of action and milestones to meet courseware update/development and training requirements.

Training dates and locations for:

- DT and OT
- Production Verification Test
- Handoff Training
- Operator Training
 - Instructor & Key Personnel Training
 - New Equipment Training (NET)
 - Familiarization Training
- l. Front End Analysis Team (FEAT) process/meetings
- m. ILS Program Risk Management. The Contractor shall brief any program risks that may affect the ILS effort. Risk items

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shall be analyzed according to program, cost, schedule, and performance. Risk items to be considered are any tasks that are a part of the ILS effort (i.e. TMs, provisioning, maintenance, CM).

- n. Quality control process for ILS development
- o. Provisioning to include procedures for developing data and identifying long leadtime items.

C.15.2 GOVERNMENT FURNISHED EQUIPMENT (GFE), MATERIAL (GFM), INFORMATION (GFI) The Government will provide the Contractor GFE, GFM and GFI in accordance with Attachment 2.

a. The Contractor may request additional GFE from the Government to support development of SLEP upgrades. The Government will make every effort to provide the requested GFE within required timeframes.

b. The Contractor shall maintain a data record of GFE items. GFE data records should, at a minimum include: Item identifiers (nomenclature, NSN and/or part number), date received, condition of item on receipt, date the item was returned to Government, condition of the item when returned.

c. The Contractor and the Government shall jointly review and reconcile their GFE data records at the second FEAT meeting (para C.15.3.1) and on a quarterly basis thereafter."

C.15.3 FRONT END ANALYSES (FEA). The Contractor shall establish an FEA process for its review of the SLEP modifications in order to integrate maintenance of LAV SLEP items/assemblies into the USMC maintenance concept. The Contractor shall brief its results and recommendations to the Government at scheduled meetings (paragraph C.15.3.1.)

C.15.3.1 FRONT END ANALYSES TEAM (FEAT) MEETINGS. FEAT meetings are Contractor/Government reviews of Contractor FEA findings and recommendations (paragraph C.15.3). The Contractor shall host no more than four meetings at the Contractor site. Each meeting shall last no longer than 4 days. The Contractor shall cover all operator maintenance tasks, removal/replacement tasks, and as many repair tasks. The Contractor shall be responsible for identifying components required for repair of SLEP circuit cards, but will not be responsible for developing circuit card repair procedures. Contractor recommendations shall include a complete rationale for the proposed maintenance philosophy for each item/assembly and applicable personnel Military Occupational Specialty (MOS). The Government shall make the final determination of the maintenance concept for each item/assembly briefed at the FEAT meetings. The Contractor shall develop SLEP logistics deliverables IAW the Government's guidance.

C.15.4 LOGISTICS DATA DEVELOPMENT. The Contractor shall develop Logistics Management Information (LMI) data that is supported by the Contractor engineering design efforts. MIL-PRF-49506 may be used as guidance. The Contractor shall establish a SLEP logistics database which is consistent with the USMC Maintenance Concept (Attachment 8). The Contractor shall produce TM and SL-4 (parts manual) pages for the SLEP modifications that detail the operational and maintenance procedures for the SLEP components. The SLEP database shall contain, at a minimum: tools, parts/components, bulk items, indenture levels, Source Maintenance Recoverability (SMR) Codes, Military Occupational Skills (MOS), and maintenance times to perform each task.

C.15.4.1 GOVERNMENT FURNISHED MATERIAL (GFM). The Contractor shall develop remove/replacement procedures for GFM SLEP items and assemblies. The Contractor shall refer repair of GFM items to the applicable TMs. The Government will provide to the Contractor the applicable DoD TM to be referenced for repair of the GFM.

C.15.4.2 TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT. The Contractor shall develop TMDE to support SLEP modifications if the upgrades require troubleshooting/maintenance capability beyond the capability of the current LAV TMDE (General Purpose Interface Assembly). If required to provide additional TMDE capability, the Contractor is required to upgrade and/or modify the GPIA currently used to trouble shoot LAVs. The Contractor shall reference the TMDE in applicable SLEP testing/troubleshooting procedures. The Contractor shall: (1) Ensure that the TMDE has been properly tested against SLEP components and that the resulting test/troubleshooting procedures are validated; (2) Deliver two (2) prototype TMDE units (hardware, software, and/or firmware) and hardcopies of the test/troubleshooting procedures to a Government-designated test site NLT the beginning of DT/OT. The Government prefers the full use, upgrade, and/or modification of TMDE currently used to troubleshoot LAVs (e.g. GPIA). The Government will verify TMDE operation/maintenance procedures during the Logistics Reviews (see para C.15.5) and will test TMDE performance parameters during DT/OT.

C.15.4.3 MANAGEMENT OF LOGISTICS DATA. The Contractor shall maintain and update its logistics documentation. Each update shall be considered as new data for purposes of review, approval, and delivery. Data shall be updated to reflect changes in support requirements resulting from logistics support improvements or corrections resulting from a Government/Contractor analysis of testing data.

C.15.4.4 MILITARY OCCUPATIONAL SPECIALTIES (MOS). The Contractor shall use existing USMC LAV MOSs when identifying the appropriate MOS for operating and maintaining LAV SLEP modifications. If, however, the Contractor determines that existing USMC LAV MOSs do not meet the requirements for supporting the modifications, then the Contractor shall identify the required MOS from the GFI in Attachment 2 (MCO P1200.7S).

C.15.4.5 Transportability: The Contractor shall do a transportability analysis on LAVs if SLEP components increase the weight and/or shape of LAVs beyond the ORD requirement. The analysis shall indicate the impact of weight/dimension on the LAVs swim capability and on its ability to be transported by rail, air or highway carriers, as indicated in the ORD.

C.15.5 LOGISTICS REVIEWS. The Contractor shall hold not more than four Logistics Reviews which will address LAV SLEP maintenance, provisioning, configuration management (CM) and TM data. The Contractor shall also address ILS program review and coordination issues

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in the agenda. Logistics Reviews shall be structured around complete assemblies. Logistics Reviews shall be scheduled to coincide with assigned deliveries of the TM and SL-4 for the items/assemblies being reviewed. The Government and Contractor shall review additions, modifications and deletions to TM and SL-4 pages. Each review shall not exceed 20 working days. The Contractor shall deliver the SL-4 data 30 days prior to the Logistics Review in accordance with ELIN A011.

C.15.5.1 SLEP MAINTENANCE VERIFICATION. The Government shall perform an assessment/physical disassembly of items/assemblies to verify that the Contractor's TM and SL-4 data are consistent with the USMC maintenance concept and/or FEAT process (para C.15.3.1.) The Contractor shall validate the data prior to a Logistics Review. The Contractor shall provide the following data as a minimum for each review:

- a. TM and SL-4 pages reflecting SLEP hardware and or LAV interfaces
- b. Drawings or sketches that identify part numbers and nomenclatures for the purpose of cataloging the items to the DoD inventory system
- c. Provisioning data reflecting the system in a top-down breakdown structure
- d. A listing of tools and Test Measurement Diagnostic Equipment (TMDE) required for each operation task and/or maintenance task according to its applicable echelon. The Contractor shall identify the tools as either special or common. Special tools are those not currently available to the USMC (Attachment 2). The Contractor shall provide a cost estimate for procurement of the special tools in the quantity required for the applicable maintenance echelons. The Contractor shall also list those tools that are no longer required for LAV maintenance as a result of SLEP modifications.
- e. The Contractor shall ensure that the ILS vehicle on loan from the Government is available for each Logistics Review. The Contractor shall also make available the applicable SLEP components, common tools and special tools (not identified in Attachment 2), TMDE, support equipment, consumable items and bulk items that were identified during the Contractor's logistics development.
- f. Maintenance task analysis and validation summary. This analysis shall include the items highlighted in Attachment 10. The Contractor shall deliver the Maintenance Task Analysis data in accordance with A019 and Attachment 10.

C.15.5.2 GOVERNMENT DIRECTION. All Government comments/direction provided to the Contractor at the review will be considered as final. Government comments/direction shall be limited to clarifying requirements within the SOW. The contractor will not be directed to perform work outside the SOW.

C.15.5.3 CONTRACTOR PERSONNEL. The Contractor shall provide technical personnel at the review who understand ILS, are familiar with the SLEP logistics data, and can effectively address Government concerns on the data being reviewed. Contractor personnel who developed the data being reviewed should support its review.

C.15.5.4 NOTIFICATION OF TOOLS REQUIRED FOR LOGISTICS REVIEWS. The Government will provide a General Mechanics tool kit thirty days after contract award. The Contractor shall notify the Government of common tools required for ILS development which are not contained in the GFE tool kits NLT 30 days prior to each Logistics Review. The Government will make every effort to acquire the required common tools for the Contractor prior to the Logistics Review. If the Government cannot provide the tool, the Contractor shall acquire the tool. The Contractor shall not delay its ILS development because a common or special tool is not available. If a given tool or TMDE has a unit price greater than \$5,000, the Contractor shall obtain permission from the Government to procure it.

C.15.5.5 COMPUTER ACCESS. The Contractor shall provide on-line computer access in order to update and correct the provisioning, and TM data at each Logistics Review. The Contractor shall update its database in accordance with Government direction provided at the Logistics Reviews.

C.15.5.6 CORRECTION OF DATA AND DELIVERABLES. The Contractor shall deliver corrected SL-4 pages, TM pages and PMR data thirty days after each Logistics Review (ELINS A012).

C.15.5.7 PHS&T ISSUES. The Government shall notify the Contractor when designated Government personnel will attend the Logistics Reviews to discuss PHS&T (Packaging, Handling, Storage and Transportation) issues NLT 15 days before the applicable Logistics Review. PHS&T issues are addressed in detail in Section D.

C.15.5.8 PROVISIONING MASTER RECORD (PMR). The Contractor shall develop provisioning data to support the SLEP program IAW MIL-STD 1840 and MIL-PRF 49506, Appendix B. The Contractor shall arrange the provisioning data in a top-down breakdown sequence. MIL-HDBK-502 may be used as a guide. The minimum provisioning requirements are outlined in Attachment 6. The data shall be delivered IAW ELIN A013. At the SOW meeting the Government will provide the Contractor with the Interactive Computer Aided Provisioning System (ICAPS) software that the Contractor shall use in preparing and delivering the provisioning data.

- C.15.5.8.1 ENGINEERING DATA FOR PROVISIONING (EDFP). The Contractor shall deliver the EDFP IAW ELIN A014. The EDFP shall, at a minimum, provide:
- a. Technical identification of items for maintenance support considerations.
 - b. Source of supply and/or manufacturers of the items.

- C.15.5.8.1.1 EDFP is required in the order of preference shown below:
- a. Government or recognized industry specifications or standards.
 - b. Engineering drawings.

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- c. Commercial catalog illustrations and/or descriptions.
- d. Sketches or photographs with brief descriptions of dimensional, material, mechanical, electrical or other descriptive characteristics. When sketches or photographs are provided for an assembly, a parts list shall be provided.

C.15.5.8.2 PROVISIONING SCREENING. The Contractor shall submit provisioning screening to the Defense Logistics Information Service (DLIS), in accordance with ELIN A015 and Attachment 7, 45 days prior to each Logistics Review. The data shall address complete assemblies for each Logistics Review. The Contractor may use LOGRUN for this effort.

C.15.6 TECHNICAL MANUAL CONTRACT REQUIREMENTS (TMCR). TMs developed under this Contract shall be prepared IAW the LAV SLEP TMCR (Attachment 4). See ELIN A017.

C.15.7 RECOMMENDED REPAIR PARTS LIST (RRPL). The Contractor shall develop a listing of parts and special tools it recommends as required to support the density of SLEP-modified LAVs for 12 months after Initial Operational Capability (IOC), projected for Nov 04, IAW ELIN A016. The list shall identify SLEP assemblies and related down parts in a top-down breakout sequence. The Contractor shall format the RRPL to include data elements provided in Attachment 3. The Government's parts order will be added by supplemental agreement in Phase II, reference C.25.8.

- C.15.8 TRAINING. The Contractor shall provide training for the following activities:
- Vehicle Familiarization
 - Developmental Test and Operational Test (DT and OT): This includes operator and limited on vehicle maintenance training for the unique aspects of the vehicle that relate to the SLEP modifications.

C.15.8.1 TRAINING REQUIREMENTS . The Contractor shall produce course material that includes a training course outline and appropriate text. Prepare and deliver in accordance with ELIN A018. The text shall be detailed enough to adequately supplement course lectures and exercises and should include a list of all general and special tools required to conduct training. The Contractor shall provide one copy of the course material to each student at the start of the course. Training course material shall be in Contractor format and shall be sufficient to support operator and maintenance training. The target audience is high school graduates with an eighth grade reading level who have had little technical training. Courses shall include safety and hazard instruction. The student to instructor ratio shall not exceed thirty to one for lecture instruction and seven to one for instruction involving practical applications. Classes shall not be conducted on weekends or holidays. The Government shall provide adequate classroom facilities for DT/OT training.

C.15.8.2 SLEP FAMILIARIZATION TRAINING. The Contractor shall conduct one SLEP familiarization training course at its facility. The course shall consist of both classroom and on-vehicle training. This course should be designed to cover SLEP modifications for SLEP team members who have a general understanding of the LAV configuration. Training should address all major components of the SLEP modifications, their functions and their performance characteristics. Student maintenance activities shall be restricted to operator level. The course duration not exceed 40 hours and there will be 20 students attending. The Contractor shall propose a course date at the ILS SOW meeting and determine the number of required instructors.

C.15.8.3 DT and OT (Operator and Maintenance) TRAINING: This training shall focus on the impact of SLEP modifications on current LAV operating procedures. Separate classes shall be provided for DT and OT consisting of both operator and maintenance training. Each operator/driver training class shall not exceed 40 hrs. Maintenance training shall include on-vehicle maintenance training encompassing troubleshooting procedures to the LRU level and remove and replace tasks at the organizational level. Training shall not cover off-vehicle repair. Maintenance training shall not exceed 40 hrs. Training shall begin within five days of SLEP LAV arrival at the designated training site. The Government will provide 4 SLEP prototype vehicles for the training. This training shall be completed for all students prior to testing. The training day shall not exceed 10 hours. The number of students for operator or maintenance training shall not exceed 30. If training is required on the LAV-AT, then the contractor shall provide 20 hours of combined operator and maintenance training prior to the start of the LAV-AT test efforts. The Contractor shall provide all SLEP unique special tools and parts required to support the training.

C.15.8.4 The Contractor shall conduct one hands-on SLEP installation training class at its facility. Training shall consist of both classroom and on-vehicle training, as required, and shall not exceed one day (10) hours. This training shall focus on providing an explanation of the major components of the SLEP modifications, how they work, and hands-on instruction on how SLEP upgrades are to be installed in the vehicle. The course shall be designed for Marines who are subject matter experts and who will be involved in kit installation. Class size shall not exceed 10 people. The class shall be scheduled to begin one day prior to the Maintenance Conference in Arpil 2001.

- C.15.9 TEST SUPPORT. The Contractor shall provide the following support for SLEP LAV testing (Section E):
- System support for on-vehicle components
 - Limited Technical Inspection
 - Field Service Support

C.15.9.1 GOVERNMENT FACILITIES. The Government will provide space as required at each site for storage of system support items and for office facilities. The Government will also provide an office that will have, as a minimum, furniture, electrical hookups, and a telephone line hookup.

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C.15.9.2 SYSTEM SUPPORT. The Contractor shall provide system support for LAV SLEP DT/OT. System support is defined as providing any items required to support the entire vehicle configuration for on-vehicle components. The Government will provide LAV General Mechanics tool kits, and petroleum oil and lubricants (POL), and one set of SL-3 tools (excluding weapons or communication equipment) for each vehicle under test as GFE in accordance with Attachment 2. The Contractor shall provide all other tools to support the on-vehicle maintenance that is to be performed by the USMC. The Contractor shall ensure that the replacement part is available at the test site within 48 hours of notification. The Contractor shall also provide TMs for all tests that include, as a minimum, all SLEP operations and remove/replace maintenance procedures. The Contractor shall conduct an analysis on failed items and will provide the Government the analysis results.

C.15.9.3 FIELD SERVICE SUPPORT (FSR). The Contractor shall provide capable and knowledgeable personnel to support the USMC with on-vehicle maintenance of the SLEP components. The Contractor FSR shall be available to assist during the entire USMC maintenance workday (not to exceed 12 hrs). No maintenance will be performed on weekends unless specifically approved by the Contract Officer Representative (COR).

C.15.9.4 LIMITED TECHNICAL VEHICLE INSPECTION (LTI). The Contractor shall perform LTIs of all the vehicles that are used for training or test upon receipt of the vehicles at the training test site. The Contractor shall conduct another LTI prior to the commencement of DT/OT. If a component is missing or requires replacement, the Contractor shall obtain a replacement. The Contractor will be allowed no more than 8 hours per vehicle for the LTI and to condition the vehicle as operational.

C.16 CONFIGURATION MANAGEMENT (CM).--PHASE I

C.16.1. CONFIGURATION IDENTIFICATION/BASELINE. The SLEP vehicle modifications as identified in the Purchase Description, Attachment 1, shall be designated a Configuration Item (CI). Vehicle and component configurations will be firmed up in accordance with the scheduled Design Review Meetings. Any configuration changes required after prototype delivery will require Government approval. The data documenting these changes shall be kept to a minimum. The configuration baseline shall be that baseline established upon delivery of the prototype vehicles for test and as modified by changes and corrections agreed upon as a result of DT/OT.

C.16.2 Prior to delivery of the prototype vehicles, the Contractor shall document and track all changes using Engineering Change Orders (ECO) and other Contractor tracking procedures. After delivery of prototype vehicles, all configuration changes require Government approval via the ECP or RFD/RFW process (reference ELINs B016, B017 and B018, C.26.2 and C.26.3). The ECO data shall be made available to the Government, as information-only, upon request. The Contractor's configuration control program shall:

- a. Ensure effective control of all CIs and their approved configuration documentation.
- b. Provide effective means, as applicable for: (1) Proposing engineering changes to CIs, (2) Requesting Deviations or Waivers to such items.
- c. Ensure implementation of approved changes.

C.17 RESERVED

C.18 CAIV REQUIREMENTS-Phase I

C.18.1 CAIV Plan. The Contractor shall implement the CAIV plan submitted with its proposal, and update the plan as required through the life of the SLEP program in accordance with ELIN A021.

C.18.2 CAIV Integrated Product Team (CIPT). Within 30 days after contract award, the Government and Contractor /major subcontractors shall meet at the contractor's facility to establish the CIPT. The purpose of the CIPT is to identify and evaluate cost-performance tradeoffs, validate program LCC methodology, identify risk areas in achievement of CAIV goals, and identify promising cost reduction initiatives. The CIPT shall develop initial CAIV goals for O&S Cost and Disposal Cost for the SLEP upgrades, and identify methods of tracking achievement of these goals. One product from the initial meeting shall be a list of metrics to determine progress toward achieving the SLEP CAIV goals. These metrics shall be incorporated into the plan and a revised CAIV plan submitted to the Government by 60 DAC. The CIPT shall meet periodically (approximately twice a year) to review the CAIV plan and metrics.

C.18.3 Program Status Reviews (PSRs). The contractor shall report CAIV status (progress against goals and metrics) at PSRs

C.19 EARNED VALUE -based PERFORMANCE MANAGEMENT SYSTEM (EVPMS). Earned Value-based Performance Management System (EVPMS) is a tool that allows both Government and contractor program managers to have visibility into technical, cost, and schedule progress on their contracts." EVPMS shall be used on the LAV Service Life Extension Program (SLEP) to ensure that program cost, schedule, and performance objectives are integrated and tracked to ensure their achievement. EVPMS shall be used as a key tool in managing program risk; however, contract EVPMS requirements shall be tailored down to the minimum necessary based on the SLEP Risk Analysis/Risk Management Plan (ref. C.7.5).

C.19.1 Responsibilities.

C.19.1.1 Program Integration Contractor: The Contractor retains the primary responsibility for managing the SLEP program. As a result, they also shall retain the primary responsibility for managing their EVPMS process/system, as a tool to ensure that contractor and Government program managers have visibility into progress toward achieving program cost, schedule, and performance objectives. The

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Contractor shall summarize and report on EVPMS metrics in monthly Cost Performance Reports-no criteria (CPR-NC) and at Program Status Reviews. The contractor shall monitor the effectiveness of their EVPMS system, and that of their major subcontractors. The contractor and the Government shall jointly determine the extent of subcontractor involvement in the EVPMS program, but the contractor shall maintain responsibility for monitoring/consolidating the subcontractor's EVPMS input into its EVPMS system/reports, and shall be responsible for its accuracy.

C.19.1.2 PM, Light Armored Vehicles (PM-LAV). PM-LAV shall review the contractor's CPR-NC submissions, and, in partnership with the contractor, monitor progress toward achievement of program cost, schedule, and performance goals. PM-LAV shall chair the Integrated Baseline Review (IBR), and any other formal EVPMS reviews held during the course of the SLEP program.

C.19.1.3 Procuring Contracting Officer (PCO). The PCO shall effect any contract modifications required to affect changes to contract EVPMS requirements, or may designate this responsibility to the ACO. The PCO, ACO, and PM-LAV shall jointly review the contractor's EVPMS plan to verify its adequacy.

C.19.1.4 RESERVED

C.19.1.5 RESERVED

C.19.2. Integrated Baseline Review: An Integrated Baseline Review (IBR) will be conducted to seek mutual understanding of and agreement to contractor planning for SLEP EVPMS. Fourteen days prior to the IBR, the Contractor shall provide its System Description, WBS Dictionary, Cost Account Matrix, Responsibility Assignment Matrix, and sample master, intermediate and detail schedules, as well as, sample Work Authorization Documents and their flows. The IBR shall be held at the Contractor's facility by NLT 120 DAC. The IBR shall be chaired by PM-LAV, and shall address the following issues, as a minimum:

- Verify technical content of the Performance Measurement Baseline (PMB) and accuracy of related resource (budgets) and schedules;
- Ensure that there is a logical sequence of effort planned consistent with the contract schedule;
- Conduct a technical assessment of the earned value methods that will be used to measure progress to assure that objective and meaningful performance data will be provided;
- Establish a joint understanding of the contractors EVMS, to serve as the basis for future reviews of EVM planning, status, and estimates at completion to ensure that baseline integrity is maintained throughout the life of the contract.
- Tailoring of reporting to the minimum level required for effective contract management and oversight.

C.19.3 EVPMS Reporting.

C.19.3.1 Cost Reporting. The Contractor shall provide a standard Cost Performance Report in Contractor format, , which shall include the following data elements at task level:

- a. Current and Cumulative Budgeted Cost of Work Scheduled (BCWS)
- b. Current and Cumulative Budgeted Cost of Work Performed (BCWP)
- c. Current and Cumulative Actual Cost of Work Performed (ACWP)
- d. Schedule Variance (SV)
- e. Cost Variance (CV)
- f. Latest Revised Estimate at Completion (LRE)
- g. Variance at Completion (VAC)
- h. Budget at Completion (BAC)

The CPR-NC shall be submitted electronically in accordance with ELIN A026 for effort performed under cost type Contract Line Item Numbers (CLINs). In addition, the Contractor shall provide CPR data in ANSI-ASC X12 format, compatible with the Government's EVPMS tracking software. On-line access by the Government of the contractors CPR/EVM data is preferred over electronic submission, so that the Government can monitor the data and print out its own reports. Format 5 of the CPR need only be provided for commenting on significant variances or trends that the contractor considers of interest to the Government. The contractor shall immediately notify the Government when the projected WBS SPI and/or CPI values fall to 0.950 or below. The Contractor's CPR/data shall incorporate subcontractor EVPMS data.

C.19.3.1.1 Tailoring of the CPR-NC. CPR-NC requirements shall be tailored to the maximum extent possible to accommodate the contractor's EVPMS system, and to reflect the minimum essential data needed by the Government to manage the program. The Government and Contractor shall agree on the extent of tailoring of the CPR-NC at the IBR.

C.19.3.2 Contract Work Breakdown Structure. The contractor shall present the Contract Work Breakdown Structure (CWBS) and CWBS Dictionary to be used as the basis for EVPMS tracking/reporting. This CWBS shall be expanded by the contractor from the Government

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furnished CWBS, as shown in Attachment 11, to reflect the manner in which the work will be accomplished on the contract, and to facilitate management, data collection, and reporting.

C.19.3.3 Program Status Reviews. The Contractor shall report on EVPMS status at the Program Status Reviews (PSRs) (ref. C.2.3).

C.20 ENVIRONMENTAL, SAFETY & HEALTH - PHASE I

C.20.1 SAFETY ASSESSMENT REPORT (SAR). The Contractor shall perform and document a system safety assessment to identify all safety features of the hardware and software design. The assessment shall also identify hardware, software (if applicable to SLEP upgrades) and procedural related hazards that may be present in the system or equipment. This assessment shall be a comprehensive evaluation of the risk of a mishap occurring prior to testing or operation of the system. As a result of any safety analyses, hazard evaluations, Government or independent Contractor testing, the Contractor shall prepare a SAR in Contractor format. The SAR shall be submitted in accordance with ELIN A023. The SAR shall:

- Briefly describe the vehicle system and its components including software.
- Provide general physical characteristics of the system and components and describe how the software works in the system. Use photos, diagrams, sketches or drawings as necessary.
- Identify all safety features of the hardware, software, system design and inherent hazards.
- Establish special procedures and/or precautions to be observed by Government test agencies and system operators and maintainers to ensure the safety of personnel and property.
- Summarize the safety criteria/methods used to classify and rank hazards.
- Summarize results of tests and analyses used to identify hazards. Include results of tests conducted to validate safety criteria or requirements.
- Identify hazards that still pose a risk to users, and actions that have been taken to reduce this risk.
- Categorize hazards as to whether they may be expected to occur under normal or abnormal use.
- Annotate any hazardous material generated or used in the system. Provide the appropriate procedures/precautions for packaging, handling, storage, use, transportation and disposal of the material. Include explosive hazard classifications.
- Include applicable Material Safety Data Sheets.
- Identify all reference or source documents used to prepare the report.
- A signed statement from the Contractor indicating that identified hazards have been controlled or eliminated, and the system is ready for operation/test.

C.20.1.1 SAR UPDATES. In the event the vehicle system is modified or procedural changes are made, the Contractor shall update the SAR to reflect those modifications or changes. The Contractor shall submit an updated SAR IAW ELIN A023. After this second SAR delivery, the Contractor shall provide updated SAR change page notices within 30 days after any new modification or change is implemented. In addition, the Contractor shall immediately notify the Government (within 24 hours) via phone or fax if new hazards or increased risk/hazard probability levels are identified while Government testing of the vehicle (DT/OT) is ongoing.

C.20.2 HEALTH HAZARD ASSESSMENT. The Contractor shall perform and document a Health Hazard Assessment to identify health/environmental hazards and to recommend engineering controls, equipment, and/or protective procedures, to reduce the associated risk to an acceptable level. A health hazard is defined as an existing or likely condition, inherent to the operation, maintenance, transport, storage or use of material/equipment, that can cause death, injury, acute or chronic illness, disability, or reduced job performance of personnel. As part of this effort, the Contractor shall:

- Perform analyses to determine if materials cause adverse effects in living creatures.
- Determine if materials pose a present/future threat to the environment.
- Identify if materials cause damage to equipment/property during the life cycle of the system.
- Evaluate and recommend alternative materials that reduce risk levels. Cost considerations shall be part of the evaluation.
- Determine if hazardous wastes are generated and identify controls.

C.20.2.1 HEALTH HAZARD CONSIDERATIONS. Items to be assessed include, but are not limited to:

- Noise: Steady State and Impulse
- Toxic Gases
- Chemical hazards - Address the chemicals identified in the Material Safety Data Sheets to be provided with the Safety Assessment Report.
- Ionizing or non-ionizing radiation.
- Heat and Cold (to include heat stress).
- Shock and vibration to crew members and ammunition.
- Electromagnetic Radiation Effects (EMRE).
- Generation of hazardous wastes.
- Biological hazards.

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- Blast overpressure.

C.20.2.2 HEALTH HAZARD ANALYSIS REPORT (HHAR). The HHAR shall be submitted in Contractor format per ELIN A024. The data for this report shall, as much as possible, be collected from the SLEP upgraded vehicles the Contractor submits for Government testing. The Contractor in his report shall:

- Identify, describe and discuss each potential or actual health hazard issue. Include whether the hazard may be expected to occur under normal or unusual operating, maintenance or storage conditions.
- Recommend actions to eliminate, reduce or control each actual or potential health hazard described.
- Identify hazardous materials by chemical name, common or trade name, NSN (if applicable), physical form and manufacturer/supplier.
- Annotate where in the system or equipment hazardous materials are used.
- Identify the conditions under which hazardous materials pose a health threat.
- Recommend disposal actions for each identified hazardous material.
- List all source materials and references used for preparing the report.

C.20.3 SYSTEM SAFETY WORKING GROUP (SSWG). The SSWG is a chartered advisory group dedicated to addressing safety issues and supporting the Government's System Safety Manager. The primary function of the SSWG is to ensure all safety issues and identified hazards are adequately addressed, to ensure the safe, manned operation of the SLEP upgraded LAV vehicles during Government testing and fielding of the weapon system. The Contractor, major Subcontractors and the Government are active, participating members. At least one Contractor representative shall attend each SSWG. The Government will chair the meetings. The meetings will be held in conjunction with the Test IPTs (ref. E.9.2.1) and should not exceed 4 hours. The SSWG may address any issues related to system safety. Typical Contractor tasks at an SSWG meeting may include:

- Reviewing safety program status.
- Summarizing hazard analysis.
- Presenting incident assessments for system mishaps or malfunctions.
- Presenting status of assigned actions.
- Identifying safety deficiencies.

C.20.4 ENVIRONMENTAL ASSESSMENT. In order to support US Government testing, the Contractor shall perform an Environmental Assessment to determine environmental impacts of SLEP upgrades. As a result, the Contractor shall provide an Environmental Impact Statement (EIS). The EIS shall be submitted in Contractor format per ELIN A025. The EIS shall contain, as a minimum, an analysis of the impact that the upgrades have on the environment (personnel, wildlife, atmosphere, water, vegetation, soil) while it is being operated, transported, or stored. Include any hazardous/toxic wastes generated.

SECTION C - PART THREE - APPLICABLE TO PHASE II

C.21 Phase II Options for Installation of Vehicle Upgrade Kits: Installation of kits under Phase II shall be accomplished based on exercise of one of two options (the Government shall not exercise both options). In either case, the integration effort shall be accomplished in accordance with the schedules in Section F, and the Contractor shall maintain Total System Responsibility in accordance with C.1.2.3.

C.21.1 Option 1 - Contractor Installation at Field Units Combined with Depot Coordination (FY 03 and 04 options). Under this option, the Contractor shall be responsible for any and all effort required to install upgrade kits in vehicles located at field units (i.e. those not located at either MCLB Albany or Barstow). This shall include any required vehicle teardown and reassembly effort. The Contractor shall not be required to repair or refurbish the vehicles; only perform effort related to installation of upgrade kits. For installation on vehicles located at MCLB Albany and Barstow, the Contractor shall coordinate the installation with the ongoing IROAN effort in accordance with the Contractor's Manufacturing Plan. Inspection and acceptance of vehicles after installation shall occur at the place of installation. The Contractor shall be required to ship upgrade kits and any equipment or material required for installation to the installation site. The Contractor shall be required to manage the kits, equipment and material at the site, and shall be responsible for replacing any items that are missing or damaged with new items at no additional cost to the Government. The Government shall provide, at the active duty battalion sites, secure storage facilities for material, space, and facilities for installation, and office facilities for Contractor personnel. The Contractor shall be allowed to use any equipment/ tools/facilities available at each site for the installation effort, but shall be required to supply any equipment/tools that are not available at the site. The Government shall provide all Petroleum, Oil, and Lubricants (POL) necessary to support the installation and final inspection effort.

C.21.2 Option 2 - Teardown, Reassembly, and Limited Installation by Government Personnel at Field Units with Contractor Oversight & Installation; Combined with Depot Coordination (FY 03 and 04 options). Under this option, Government personnel will tear down and reassemble the vehicles located at field units (i.e. those not located at either MCLB Albany or Barstow), and perform limited (third echelon tasks, i.e. remove and replace) installation. Field unit installation effort will only be done as proposed and as detailed in the Contractor's Manufacturing Plan and approved by the Government. The Contractor shall be required to perform any installation effort not performed by Government personnel, and shall oversee the Government installation effort. The Contractor shall not be required to repair or refurbish the vehicles; only perform effort related to installation of upgrade kits. For installation on vehicles located at MCLB Albany and Barstow, the Contractor shall coordinate the installation with the ongoing IROAN effort in accordance with the

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Contractor's Manufacturing Plan. Inspection and acceptance of vehicles after installation shall occur at the place of installation. The Contractor shall be required to ship upgrade kits and any equipment or material required for installation to the installation site. The Contractor shall be required to manage the kits, equipment, and material at the site, and shall be responsible for replacing any items that are missing or damaged with new items at no additional cost to the Government. The Government shall provide, at the active duty battalion sites, secure storage facilities for material, space and facilities for installation, and office facilities for Contractor personnel. The Contractor shall be allowed to use any equipment/ tools/facilities available at each site for the installation effort, but shall be required to supply any equipment/tools that are not available at the site. The Government shall provide all Petroleum, Oil, and Lubricants (POL) necessary to support the installation and final inspection effort.

C.21.3 Contractor and MARCORLOGBASE Depot SLEP Production Efforts - Phase II. Within 30 days after exercise of the first (FY02) upgrade kit option, the Contractor shall meet with PM-LAV, MARCORLOGBASE, and field unit personnel to discuss how best to coordinate Phase II installations. The parties shall review the most efficient timing of the SLEP tasks, in order to minimize schedule risk and maximize overall process efficiency. This review shall include any work proposed by the Contractor to be shifted to the Depot IROAN effort. Within 30 days after the meeting, the Contractor shall submit an updated Manufacturing Plan (ref. C.3 and ELIN B003) reflecting agreements reached at the meeting. This plan shall be followed by the Contractor for Phase II installation after Government approval, and in accordance with the installation option chosen (ref. C.21.1 and C.21.2). This plan shall also be the basis for definitization of the Phase II installation option ceiling prices.

C.21.4 Storage of Vehicle Upgrade Kits. The Contractor is responsible for storing vehicle upgrade kits at its facility from acceptance until shipment to the point of installation. The Contractor is responsible for replacing any parts in the kit(s) that are damaged or lost while in storage with new parts at no additional cost to the Government. The kit option prices shall include any costs related to storage.

C.22 MEETINGS/CONFERENCES/REVIEWS.

C.22.1 AGENDAS. The Contractor shall submit an agenda and read-ahead package/briefing charts fifteen days prior to each meeting except for meetings hosted by the Government. All agendas shall be in Contractor format (ref. ELIN B001) and shall include, as a minimum: the location, date(s) and duration of each meeting; a daily chronological listing of each topic to be discussed, the time allotted for each and the name of the presenter; a status (or list) of action items/problem issues identified at previous meetings.

C.22.2 MINUTES. The Contractor shall prepare and submit meeting minutes within 10 days after each of meeting, except for meetings hosted by the Government. All minutes shall be in Contractor format (ELIN B002) and shall include, as a minimum: Meeting location, date(s) and duration; list of attendees; a status of open action items/problem issues; list of new action items/problem areas, to include required resolution dates; summary of discussions.

C.23 PRODUCTION - PHASE II

C.23.1 Production Progress Report. The contractor shall prepare and deliver on a monthly basis a report that displays the production Line of Balance (LOB) status in accordance with ELIN B004. The report should include, the status of production activities related to chassis modifications, application of survivability enhancements, turret drive, electrical system upgrade, transfer case application, and other critical improvements identified as trade studies are completed and the program is defined. The points of application within the manufacturing process of components and assemblies included in the LOB report shall be included in the production flow chart of the next higher assembly.

C.23.2 The Production Progress Report, covering the first through last day of each calendar month, shall be submitted as of the end of the first full month that vehicle delivery is required. Reports are due by the fifth working day of the following month. The report shall be submitted each month thereafter with a final report submitted as of the end of the month the Contractor delivers the final vehicle under this contract.

C.23.3 During periods when no production activities relative to the above components and assemblies are on-going, the report shall provide the status of long lead procurements to support the manufacturing of these components and assemblies. This information shall include long lead item part number and description, procurement leadtime, order date(s), quantities ordered, quantities received and status of the balance quantity on order. The LOB report shall include in a tabular form a description of the production activities at the critical process control points and the interrelated leadtimes between the control points. The use and color coding of symbols in the report is optional. The contract schedule for the LOB Objective chart for the components and assemblies produced by any subcontractors and vendors will be in accordance with the contracts/purchase orders with the prime contractor.

C.24 QUALITY ASSURANCE REQUIREMENTS- PHASE II

C.24.1 FINAL INSPECTION RECORD (FIR) PHASE II (PRODUCTION). The contractor shall be provided a copy of the LAV-AT, LAV-L, LAV-R, LAV-M, LAV-CC, MEWSS and LAV-AD Automotive/Hull Inspection Checklists as Government Furnished Information (GFI), see attachment 2. Using the inspection checklist and the LAV-25 FIR (developed in Phase I) as a guide, the contractor shall then develop a FIR for each of the LAV Family of Vehicles (in contractor format) that will provide inspection criteria for accepting the upgraded LAV SLEP vehicle configuration. The FIR shall contain inspection criteria for all the characteristics outlined in the LAV Purchase Description, Table I

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for Quality Conformance Inspection (QCI). The FIR shall be provided to the Government prior to the First Production Vehicle Inspection of each variant type for review in accordance with ELIN B006.

C.24.2 QUALITY CONFORMANCE INSPECTION AND TEST PROCEDURES (QCI&TP) FOR LAV SLEP UPGRADE KITS. The Contractor shall develop QCI&TP for the inspection and acceptance of each SLEP Upgrade Kit developed under this contract. The QCI&TP shall include the inspection and test controls specified in the drawings, specifications and any related data. The QCI&TP shall be prepared in Contractor format and submitted to the Government prior to inspection of the first Production Kit developed for each variant type. The QCI&TP shall be submitted to the Government for review in accordance with ELIN B005.

C.25 INTEGRATED LOGISTICS SUPPORT (ILS). Phase II

C.25.1 ILS DURING PHASE II. The Contractor shall perform ILS during the production phase of the LAV Service Life Extension Program (SLEP) in accordance with procedures and provisions that were reviewed and established during Phase I

C.25.2 GOVERNMENT FURNISHED EQUIPMENT (GFE), MATERIAL (GFM), INFORMATION (GFI) The Government will provide the Contractor GFE, GFM and GFI in accordance with Attachment 2.

a. The Contractor may request additional GFE from the Government to support development of SLEP upgrades. The Government will make every effort to provide the requested GFE within required timeframes.

b. The Contractor shall maintain a record of GFE items. Data in GFE records should, at a minimum include: Item identifiers (nomenclature, NSN and/or part number), date received, condition of item on receipt, date the item was returned to Government, condition of the item when returned.

c. The Contractor and the Government shall jointly review and reconcile their GFE records on a quarterly basis.

C.25.3 FRONT END ANALYSES TEAM (FEAT) MEETINGS. The FEAT members shall be Contractor and Government ILS personnel. The Contractor shall host one meeting at the Contractor site, if required by the Government in order to resolve operator/maintenance issues that may arise from design changes or problems identified during DT/OT testing

C.25.4 TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE).

The Contractor shall deliver a proposal for TMDE identified in para C.15.4.2 within 30 days after completion of DT/OT, unless no new/modified TMDE is required. The quantity of and TMDE required will be specified by the Government no later than the start of DT/OT.

The Government will add the requirement for delivery of TMDE by supplemental agreement concurrent with exercise of the first production option.

C.25.5 LOGISTICS REVIEWS. The Contractor shall hold not more than two Logistics Reviews to address ILS program review and coordination, as well as residual maintenance, TM, provisioning and configuration issues/actions. The Government and Contractor shall review additions, modifications and deletions to TM and SL-4 pages. The reviews shall address maintenance, provisioning, SL-4 and TM data in accordance with procedures established during the R&D phase. The Contractor shall deliver the SL-4 data 30 days prior to the Logistics Review IAW ELIN B010.

C.25.6 PROVISIONING MASTER RECORD (PMR). The Contractor shall develop provisioning data IAW procedures described in para C.15.5.8. The minimum provisioning requirements are outlined in Attachment 6 and shall be delivered IAW ELIN B012.

C.25.6.1 ENGINEERING DATA FOR PROVISIONING (EDFP). The Contractor shall follow procedures described in paras C.15.5.8.1 and C.15.5.8.1.1. The Contractor shall deliver the EDFP in accordance with ELIN B013.

C.25.6.2 PROVISIONING SCREENING. The Contractor shall follow procedures established in par C.15.5.8.2. The Contractor shall deliver the provisioning screening data, in accordance with ELIN B014 and Attachment 7, 45 days prior to each Logistics Review.

C.25.7 TECHNICAL MANUAL CONTRACT REQUIREMENTS (TMCR). TMs developed under this contract shall be prepared and delivered in accordance with the LAV SLEP TMCR (Attachment 4).

C.25.8 PROCUREMENT AND DELIVERY OF SPECIAL TOOLS AND RRPL COMPONENTS. The Contractor shall deliver a firm-fixed price proposal for special tools and parts identified on the Government-approved RRPL (reference C.15.7 and ELIN A016) within 30 days after completion of DT/OT. The Government will add the requirement for delivery of RRPL parts and tools from the list by supplemental agreement modification concurrent with the exercise of the first production option. The proposal should reflect quantity price discounts for ordering the items/tools concurrent with material for production. After the modification is effected, the Contractor shall ensure that the items delivered are consistent with the SLEP component production configuration. The Contractor shall replace parts that are no longer consistent with SLEP components at the time of delivery at no cost to the Government NLT three months after Government notification.

C.25.8.1 The Contractor shall ensure that 100% of all tools and parts ordered that are removed at second echelon and 50% of the parts ordered that are removed at third echelon, are delivered 17 months after exercise of the first production option. The remaining parts shall be delivered 25 months after exercise of the first production option.

C.25.9 TRAINING. The Contractor shall provide training for the following activities:

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- Product Verification Testing (PVT)
- Instructor and Key Personnel (I&KP)
- New Equipment Training

C.25.9.1 TRAINING COURSE REQUIREMENTS. The Contractor shall produce course material that includes a training course outline and appropriate text. The text shall be detailed enough to adequately supplement course lectures and exercises. The course will include instructions on safety procedures and hazard awareness. Classes will not be conducted on weekends or holidays. The target audience is high school graduate with an eighth grade reading level and little technical training. The Contractor shall provide one copy of the course material to each student at the start of the course. Training course material shall be in Contractor format and shall be sufficient to support operator and maintenance training. The student to instructor ratio shall not exceed twenty five to one. Training material to be prepared and delivered in accordance with ELIN B015.

C.25.9.2 PRODUCTION VERIFICATION TEST (PVT) TRAINING. Operator training shall not exceed 80 hrs, and maintenance training shall cover off-vehicle repair and shall not exceed 120 hrs. The Contractor shall commence the basic operator and maintenance training within five days of SLEP LAV arrival at the designated test site. The Government will provide 2 SLEP vehicles for the training. Training shall be completed for all students five weeks after it commences. The training day shall not exceed 10 hours. The number of students for operator training shall not exceed 12, and the students in maintenance training shall not exceed 15. The Contractor shall provide all SLEP-unique special tools and parts required to support the training. The target start date for PVT training is March 2003 for the following variants, LAV-25, LAV-AT, LAV-L, LAV-C2, LAV-M and LAV-R. Training for the LAV-AD and LAV-MEWSS is projected to begin in April 2004.

C.25.9.3 INSTRUCTOR & KEY PERSONNEL TRAINING (I&KP). The Contractor shall conduct operator and maintenance training. Operator training shall last no more than 80 hrs and shall cover only the SLEP modifications and their interfaces with the LAV. The course shall be provided to no more than 25 Marine instructors who are qualified at all echelons of maintenance. Training shall not exceed 10 hours per day. Maintenance training shall not exceed 120 hrs. Maintenance training shall cover second through fourth echelons of maintenance. The Government shall provide two SLEP vehicles for the training. The Contractor shall provide all SLEP-unique special tools and parts required to support the training. If depot level training is required per the Contractor's maintenance plan, the Contractor shall provide no more than 40 hours of training. The target start date for I&KP training is May 2003.

C.25.9.4 RESERVED

C.25.9.5 NEW EQUIPMENT TRAINING (NET). The Contractor shall conduct training for a maximum of two classes each at the Marine Expeditionary Force (MEF) I, II and III. Training shall coincide with installation of upgrade kits at the organizations (MEFs) to be trained (see Section F). Training shall be limited to a maximum of 40 students for each class. Operator training shall not exceed 80 hrs (10 eight hour days); maintenance training shall not exceed 120 hrs (15 eight hour days) and shall cover only the LAV SLEP modifications and vehicle interfaces. Training shall be conducted during the work week.

C.25.10 TEST SUPPORT. The Contractor shall provide the following support for SLEP LAV testing (Section E):

- Complete support for on vehicle components
- Limited Technical Inspection
- Field Service Support

C.25.10.1 GOVERNMENT FACILITIES. The Government space as required at each site for storage of system support items and for office facilities. Each facility, as a minimum, will have furniture, electrical hookups, and a telephone line hookup.

C.25.10.2 SYSTEM SUPPORT. The Contractor shall provide system support for LAV SLEP PVT. System support is defined as providing any items required to support the entire vehicle configuration for on-vehicle components. The Contractor shall ensure that the replacement part is available at the test site within 48 hours of notification. The Government will provide LAV tool kits, and petroleum, oil and lubricants (POL), and one set of SL-3 components for each vehicle under test as GFE IAW Attachment 2. The Contractor shall provide all other tools to support the on-vehicle maintenance that is to be performed by the USMC. The Contractor shall also provide for all tests a full-up TM and any new on-vehicle tools that are required to service LAV SLEP modifications.

C.25.10.3 MAINTENANCE/FIELD SERVICE SUPPORT (FSR). The Contractor shall provide capable and knowledgeable personnel to support the USMC with on-vehicle maintenance of the SLEP components. The Contractor FSR shall advise USMC personnel who will perform all on vehicle maintenance on an as-required basis. The FSR shall be available to assist during the entire USMC maintenance workday (not to exceed 12 hours). No maintenance work will be performed on weekends unless specifically approved by the Contract Officer Representative (COR).

C.25.10.4 LIMITED TECHNICAL VEHICLE INSPECTION (LTI). The contractor shall perform an LTI on all the vehicles that are used for training or test upon receipt of the vehicles at the training and/or test site. If a component is missing or requirements replacement, the Contractor shall provide it within 48hours. The LTI should last no more than 8 hours per vehicle to avoid test delays. Upon completion of LTI, each vehicle shall be conditioned as operational.

C.26 CONFIGURATION MANAGEMENT (CM)-Phase II.

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C.26.1. PRODUCT BASELINE: The Initial Product Baseline establishes the detailed design documentation (Item Detail Specifications) for each Configuration Item (CI), including software changes and upgrades. The Initial Product Baseline will be established as indicated in C.16.1. A Physical Configuration Audit (PCA) will be performed on first production units and/or vehicle. The final product baseline shall be established upon successful completion of the PCA on the first production vehicle and/or units. Management of the final product baseline shall remain under the control of the Contractor for a period of 1 year after delivery of the last SLEP production vehicle.

C.26.2 CONFIGURATION CONTROL. The Contractor may use MIL-STD-973 and Attachment 9 for guidance in developing ECP, RFD, and RFW documents. The Contractor shall manage the SLEP configuration baseline as follows:

C.26.2.1 Upon establishment of the initial product baseline, the Contractor shall document all changes to the CI through Engineering Change Proposals (ECPs), Requests for Deviation (RFD), or Requests for Waiver (RFW) via the MEARS described in Attachment 9. (Electronic delivery of ECPs, RFDs, and RFWs under MEARS requires as a minimum completion of mandatory fields on electronic form. Reference the following Data Item Descriptions (DIDs) for additional instructions: DI-CMAN-80639A-Engineering Change Proposal (ELIN B016), DI-CMAN-80640B-Request for Deviation (ELIN B017), DI-CMAN-80641-Request for Waiver (ELIN B018).

C.26.2.2 As a minimum, ECPs shall be supported by drawings and other data (e.g., detailed cost proposal data, test data and analyses) as specified in the contract to justify and describe the change and to determine its operational employment characteristics. A summary of any testing done by the contractor to validate concepts or new technology shall be provided with the ECP. Prepare and deliver in accordance with reference ELIN B016.

C.26.2.3 Class I ECPs shall require Government approval. The ECP shall also identify changes to the Recommended Repair Parts List (RRPL). The ECP shall identify the date the Government needs to contract for the acquisition of the initial spare parts related to the ECP in order to acquire Production Prices. If necessary, draft Modification Instructions (MI) shall be submitted with the ECP for information only and will not be judged by the Government for acceptability. If the Government approves the ECP, a final MI may be required. If required, a final MI shall be delivered 30 days after contract modification. MIs shall be prepared in Contractor format, reference ELIN B016.

C.26.2.4 Class I ECPs shall have a Contractor assigned priority code on it. The priority code shall be used in determining the relative speed at which an ECP is to be reviewed by the Government. The priorities for the ECPs shall be Emergency (E), Urgent (U), and Routine (R). Once a problem that requires a configuration change has been identified to, or by, the Contractor shall provide monthly status on the development of the solution until the formal ECP has been submitted. The status of solution shall be sent to AMSTA-DSA-LV-M. The following are the Government's processing times after an ECP has been received in the PM LAV office:

- Emergency ECPs shall be processed within 48 hours
- Urgent ECPs shall be processed within 21 calendar days
- Routine ECPs shall be processed within 60 calendar days.

C.26.2.5 The Government will provide initial, limited training on the MEARS system if requested by the Contractor. The Contractor shall give the Government 30 days advance notice if training is required.

C.26.3 REQUESTS FOR DEVIATION/WAIVER (RFD/W). Requests for Deviation or Waiver (RFD/W) shall be submitted as appropriate (ref. ELINs B017 and B018) electronically via the MEARS. Both require Government approval. The Government is allowed 30 days for review. The Contractor shall resubmit any Class II ECPs or RFDs and RFWs shall be resubmitted as Class I ECPs, when directed by the Government. Submission of those reclassified configuration changes to Class I ECPs shall also be via MEARS.

C.26.4 CONFIGURATION STATUS ACCOUNTING (CSA). The Contractor shall establish and maintain a Configuration Status Accounting (CSA) system. As a minimum, the CSA system shall provide the following data:

- a. Identification of the currently approved configuration baseline.
- b. Status of all proposed configuration changes and the effectivity point of all approved configuration changes.
- c. Historical data on the evolution of the configuration baseline.
- d. A Configuration Status Accounting and Engineering Report (CSA&ER).
- e. The status of all Class I and II ECPs, Requests for Deviation, and Requests for Waiver shall be included in the CSA&ER.

The Government may request a CSA&ER no more than quarterly, up to the date of last vehicle modification.

The CSA&E and ER shall be prepared and delivered in accordance with DI-CMAN-81253-Configuration Status Accounting Information, ELIN B019; and DI-CMAN-80463-Engineering Release Record, ELIN B020.

C.26.5 TECHNICAL DATA PACKAGES (TDPs).

C.26.5.1 SLEP TDPs. The Contractor shall develop, manage, and maintain the TDP for only SLEP modification items starting from contract award until one year after last production vehicle and/or unit delivery. The TDP shall consist of technical documentation, including but not limited to: drawings, parts lists, Bills of Materials, and Quality Assurance Provisions. After that time, Government will instruct contractor as to what documentation to deliver. Reference ELINs B022, B023, and B024.

C.26.5.1.1 Engineering Drawings. The contractor shall develop a complete product engineering drawings and associated lists package in

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accordance with MIL-STD-100, ASME Y14.100M and ASME Y14.34.M. These drawings shall include assembly and detail drawings down to the piece part for the items designed and developed at government expense. Control drawings shall be developed for all commercial off the shelf, non-developmental items, and items developed at private expense for which the government has not acquired unlimited rights. These control drawings shall provide the applicable performance specification form, fit, and function information needed for competitive procurement of that item or an interchangeable item. Prepare and deliver in accordance with ELIN B022.

C.26.5.1.2 INDENTED BILLS OF MATERIAL (IBOM). Contractor format shall be used. Each IBOM shall contain, as a minimum, item number, item name/description, and quantity. The IBOMs shall be prepared in indenture level sequence. A separate IBOM is required per variant. However, after establishing the IBOM for the LAV-25, the IBOMs for the other LAV variants shall only identify the uniqueness/differences of each variant. Prepare and deliver in accordance with ELIN B023.

C.26.5.1.3 SUMMARIZED BILLS OF MATERIAL (SBOM). Contractor format shall be used. Each SBOM shall contain, as a minimum, item number, item name/description, the revision date of the specified item, the revision number of the specified item, and the total quantity per item for the SLEP program. The SBOM shall be organized in alpha-numeric order. However, after establishing the SBOM for the LAV-25, the other SBOMs shall only identify the uniqueness/differences of each variant. Prepare and deliver in accordance with ELIN B024.

C.26.5.1.4 SUPPLEMENTAL TDP DATA. The Contractor shall make available unscheduled TDP data (drawings, parts lists, and Bills of Material) when requested by AMSTA-DSA-LV-M. In addition, the Government may request delivery of up to a total of 5 Bills of Material, in hard copy per year. The Contractor shall make available these supplementary data deliverables within 20 days after receipt of Government request. Reference ELINs B022, B023, and B024.

C.26.6 VERIFICATION OF CONFIGURATION ITEMS

C.26.6.1 PCA PLAN AND INDENTED BILLS OF MATERIAL (IBOM). The Contractor shall deliver a SLEP PCA Plan in accordance with ELIN B21. The plan shall meet the requirements of Sections C.6, C.16 and C.26. The PCA Plan shall be used as a basis for conducting the audit. The Contractor shall ensure that all documentation identified in the PCA Plan to conduct the PCA(s) is available at the start of the PCA. The initial PCA Plan shall be delivered electronically to the Government in conjunction with the IBOM; the PCA will be performed on the first production vehicle. The Government shall provide comments back to the Contractor within 30 days.

C.26.6.1.2 As part of the PCA plan the Contractor shall also deliver to the Government an Indented Bill of Material (IBOM) (ref. ELIN B023) NLT 30 days after exercise of first production option. The IBOM shall represent all SLEP items. The list shall constitute the PCA Candidates List. Within 30 days from receipt of the IBOM, the Government will advise the Contractor which items they intend to audit. Within 45 days after receipt of Government comments, the Contractor shall notify the Government when these items are available to audit.

C.26.7. PHYSICAL CONFIGURATION AUDIT. The Government will conduct one Physical Configuration Audit (PCA) on the SLEP items (i.e. components, assemblies, and subassemblies). The PCA will, if necessary, audit component interfaces with the vehicle. The ILS vehicle shall be used in lieu of the production vehicle. The PCA shall be the formal examination of the as-built configuration of the identified item against its design documentation. The PCA shall be conducted at the Contractor's or subcontractor's site on the selected candidates. The audit will be conducted on the first production unit of the selected candidates and/or the first production vehicle. The PCA plan will be used as the basis for the audit(s). The Government will initially audit no more than 25% of the entire PCA candidates. In order for the Contractor to pass the audit, 95% of audited items must be acceptable at the first attempt. Acceptable is defined as the as-built hardware matches the design documentation (drawing.) If the pass/fail criteria is met, the contractor shall correct identified deficiencies. If the pass/fail criteria of 95% is NOT met, the contractor shall review the entire SLEP TDP and make all necessary corrections to ensure that the as-built hardware matches the drawings. The Government reserves the right to perform an additional audit of 15% of the remaining PCA candidates if the first audit is unsuccessful.

C.26.7 .1 PCA SUPPORT. The Contractor shall provide the necessary materials and resources to effectively support the PCA. The Prime Contractor may have their vendors available at the PCA.

C.26.8 Data Management: All data management will be accomplished in accordance with the guidelines set forth in Attachment 9, Government Concept of Operations.

C.26.8.1 Electronic Data Access: PM-LAV's data repositories are managed by the Marine Corps Logistics Base (MCLB-) Albany. Access to data has to be authorized in Accordance with the procedures outlined in Attachment 9.

C.26.8.2 Formats to be utilized:

- Engineering Drawings/NORS CALS Raster Images (Group 4w/184A Header)
- Illustrations CALS Raster Images
- Text MS Word (.doc) (Microsoft Version Word97)
- Spreadsheets MS Excel (,xls) (Microsoft Version Excel97)

C.26.8.3 Hard Copies: All LAV technical data and drawings are either digitized or have been scanned and are available electronically. Requests for "Hard Copies" require special efforts and should be avoided.

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C.27 RESERVED

C.28 COST AS AN INDEPENDENT VARIABLE (CAIV) - Phase II

C.28.1 CAIV Plan. The Contractor shall implement the CAIV plan submitted with its proposal, and update the plan as required through the life of the SLEP program in accordance with ELIN B025.

C.28.2 CAIV Integrated Product Team (CIPT). The CAIV Working Group shall meet periodically (approximately twice a year) to review the CAIV plan and metrics.

C.28.3 Program Status Reviews (PSRs). The contractor shall report CAIV status progress against goals and metrics) at PSRs.

C.29 RESERVED

C.30 ENVIRONMENTAL, SAFETY & HEALTH - PHASE II

C.30.1.SAFETY ASSESSMENT REPORT (SAR) Updates. In the event the vehicle system is modified or procedural changes are made, the Contractor shall update the SAR submitted in Phase I (Ref C.20) to reflect those modifications or changes. SAR updates shall be in the form of change pages, submitted within 30 days after any new modification or change is implemented. In addition, the Contractor shall immediately notify the Government (within 24 hours) via phone or fax if new hazards or increased risk/hazard probability levels are identified while Government testing of the vehicle (DT/OT) is ongoing. (ELIN B028).

C.30.2 HEALTH HAZARD ANALYSIS REPORT (HHAR) Updates. HHAR updates shall be submitted in Contractor format per ELIN B029 as configuration changes occur.

C.30.3 SYSTEM SAFETY WORKING GROUP (SSWG) Meetings. SSWG meetings will continue to be held in conjunction with the Phase II Test IPTs (Ref e.9.2.1).

C.30.4 ENVIRONMENTAL ASSESSMENT Updates. In order to support US Government Phase II PVT testing, the Contractor shall review the Environmental Assessment submitted in Phase I (ref C.20) and to determine if an update is required based on configuration changes from Phase I. If required, the update shall be submitted in accordance with ELIN B030 as change pages to the original EIS.

*** END OF NARRATIVE C 001 ***

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SECTION E - INSPECTION AND ACCEPTANCE

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SECTION E
INSPECTION/ACCEPTANCE

PHASE I - RESEARCH AND DEVELOPMENT

E.1 INSPECTION OF RESEARCH AND DEVELOPMENT?

FIXED PRICE INCENTIVE 52.246-8

E.2 INSPECTION AND ACCEPTANCE POINT: Origin

E.2.1 The contractor shall conduct the Procurement Quality Assurance Inspection demonstrating the conformity of the LAV SLEP vehicle systems and other deliverable components using the applicable drawings and specifications at the following locations:

Contractor's Plant

Name

Address

Sub-contractor's Plant

Name

Address

E.3 INSPECTION AND ACCEPTANCE POINT (Data): The inspection and acceptance of any data delivered under this contract shall be at destination. Destination shall be those addresses set forth in the DD Form 1423 for each deliverable data item.

E.4 QUALITY SYSTEM AUDITS/INSPECTIONS. Operating procedures and inspection records that document the Contractor's adherence to their Quality System shall be made available for Government review when requested. The Contractor is subject to procedural audits or product inspections at any point during the contract and shall provide audit/inspection assistance upon request. Audits and product inspections will be conducted by the Government to verify the Contractor's compliance to their quality program and compliance to their documented operating procedures.

E.4.1 The PCO, ACO or the Government QAR shall provide audit and inspection results to the Contractor. The Contractor shall respond to all unsatisfactory audit and inspection results within 30 days from receipt of the Government Audit/Inspection report(s) and provide corrective action as required IAW ELIN A005. All deficiencies detected during any Government audit(s) or product inspections shall be corrected by the Contractor IAW their documented Quality Assurance Program Plan.

E.5 INSPECTION EQUIPMENT. The contractor shall be responsible to supply and maintain all inspection and test equipment necessary to assure the vehicle system and components conform to contract requirements. All inspection equipment shall be available for use at the start of production. The contractor shall make available to the Government applicable and necessary inspection equipment for use during vehicle system inspection. The Government will return all inspection equipment upon completion of inspection.

E.6 DRAWINGS FOR INSPECTION. When requested, the contractor shall provide legible drawings and printed specifications to which each SLEP vehicle system was manufactured. These drawings and specifications shall be annotated to the latest revision. After the Government completes the production inspection and acceptance, the Government will return all drawings and specifications to the contractor.

E.7 VISUAL INSPECTION CRITERIA FOR STEEL WELDMENTS.

E.7.1. The contractor shall perform visual inspections of all weld joints effected by SLEP, IAW the requirements of AWS D1.1 or the visual inspection standards outlined in TM 08594A-25/1. Subject to PCO approval, the Contractor may substitute its current method of visual inspection procedures in lieu of the above stated requirements as long as these procedures are equivalent to the above stated requirements.

E.8 QUALITY ASSURANCE REQUIREMENTS.

E.8.1 SECTION 4 OF THE PURCHASE DESCRIPTION. Section 4 (inclusive), "Quality Assurance Provisions", of the Purchase Description (Attachment 1) constitutes quality assurance and testing requirements along with those requirements set forth in this contract.

E.8.2 GOVERNMENT FURNISHED MATERIAL/EQUIPMENT. The Contractor shall be supplied GFM/GFE as delineated in Attachment 2 throughout the course of the contract. The Contractor shall inspect all such GFM/GFE upon receipt to document proper count and condition. All deficiencies discovered during this inspection shall be documented on a Quality Deficiency Report (SF form 368) and submitted to the Government, within 15 days from the time of inspection IAW ELIN A010. Handling of GFM/GFE shall be in accordance with the Contractor's Quality Program (Section C.4.1). The Government will be responsible to correct all deficient GFM/GFE and GFM Vehicles unless the

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deficiency was caused by the contractor as part of the SLEP integration process.

E.8.3 INSPECTION AND ACCEPTANCE OF PROTOTYPE VEHICLES.

E.8.3.1 The Contractor shall be provided 5 LAV-25 (MC) Vehicles for SLEP upgrades as well as an LAV variant of each variant type. The Contractor shall completely inspect each LAV variant upon arrival at contractor's facility. This inspection shall be conducted IAW the LAV Automotive/Hull Inspection Checklist provided as GFI (Attachment 2). All deficiencies shall be documented on the Deficiency Sheet attached to the Automotive/Hull Inspection Checklist and submitted to the Government as part of a SF form 368 (Quality Deficiency Report) IAW ELIN A010. This inspection shall document the condition of each Government Furnished LAV upon arrival and establish the vehicle baseline for acceptance upon completion of SLEP. All reported deficiencies discovered prior to SLEP integration are the responsibility of the Government.

E.8.3.2 Upon completion of the SLEP integration process, the contractor shall completely inspect and road test the LAV-25 prototypes vehicles (or other variants as required). Inspection shall be conducted in accordance with their Quality Assurance Program Plan (C.4.1) and the Final Inspection Record (C.4.4.3), at the contractor facilities prior to shipment to the Government test site. At least 20 calendar days prior to the inspection of the prototype vehicles, the contractor shall furnish written notice to the Procurement Contracting Officer or their representative of the time and location of the inspections so the Government may witness and participate in the inspections. At the time of inspections, the contractor's record of inspections and tests that were previously conducted on the vehicles and its components shall be made available for review by the Government representatives. All deficiencies detected by the contractor or Government and any corrective action taken shall be described in writing on the deficiency sheet attached to the FIR. The contractor shall correct all deficiencies detected by the Government on the LAV-25 prototypes (or other variants), supporting equipment and documentation prior to delivery to the Government test site.

E.8.4 QUALITY RECORDS. Quality records of the examinations and tests performed by the contractor shall be kept compete and available to the Government for a period of two years following completion of the contract. Radiographic Inspection film for each vehicle may be discarded once the vehicle is accepted and the DD-250 is signed by the Government.

E.9 LAV SLEP TEST AND EVALUATION REQUIREMENTS.

E.9.1 TESTING OF SLEP PROTOTYPES. The Government will conduct testing of four (4) LAV-25 SLEP prototypes at a Government test site(s) to be determined. The Government test sites, and actual number and type of test vehicles will be determined through the Test Integrated Product Team (TIPT) process. Testing is expected to last approximately 150 working days and will consist of safety testing, concurrent Developmental Testing (DT) and Operational Testing (OT) as well as RAM-D testing of at least 6,500 miles per test vehicle. Such testing shall be in accordance with the LAV SLEP Test and Evaluation Master Plan (TEMP), the LAV Purchase Description and FOVLAV-DPS and a Government prepared test program plan. The extent of testing may be reduced at the discretion of the Test Integrated Process Team (TIPT).

E.9.1.1 FOLLOW ON TEST & EVALUATION (FOT&E) OF SLEP PROTOTYPES. The Government may be required to conduct FOT&E upon completion of DT/OT after the implementation of any vehicle corrective actions as a result of DT/OT. FOT&E is expected to last approximately 65 calendar days and will be conducted at a Government test site(s) to be determined. The length of FOT&E may be extended at the discretion of the (TIPT).

E.9.2 TEST MEETINGS

E.9.2.1 TEST INTEGRATED PROCESS TEAM (TIPT). The Government will conduct regularly scheduled TIPT meetings (at least 4 per year) to finalize the Test Evaluation Master Plan and to develop the detailed test plan for DT. The Contractor will be required to attend these meetings. The contractor will be notified by the Government of the date and location of each TIPT meeting. The duration of each meeting will not exceed three days and may take place at one of the following locations: TACOM, Warren, MI; Yuma Proving Ground (YPG), Yuma, AZ; Aberdeen Proving Ground (APG), Aberdeen, MD. or Nevada Automotive Test Center (NATC).

E.9.2.2 SCORING AND ASSESSMENT CONFERENCE. The Government will conduct Scoring Conferences throughout DT (approximately 2 per) to facilitate operational and hardware system assessments of test data. The Scoring & Assessment Conferences provide for consistent accounting of basic failures and operational (mission) failures, as well as for scheduled, unscheduled, and essential maintenance actions in order to evaluate RAM-related characteristics of the Light Armored Vehicle-Service Life Extension Program (LAV-SLEP) vehicles. The Contractor is invited to attend each Scoring and Assessment Conference as a non-voting member. The duration of each conference will last approximately three days and the Government will notify the Contractor prior to the start of each conference of the date and location.

E.9.2.3 TEST INCIDENT REPORT (TIR) CLOSEOUT MEETINGS. The Government will conduct TIR closeout meetings within 120 days after completion of DT/OT. The TIR closeout meeting will be held at PM, LAV and the participants will include the Contractor, PM, LAV and representatives from the LAV Test Agency. All open TIRs and FACARs will be discussed at this meeting to determine the status and action required to bring them to closure.

E.9.3 CONTRACTOR TEST SUPPORT. Also refer to C.15.9 and C.25.10 entitled Test Support. The contractor shall provide field technical service representatives to support all test sites for the test duration. The contractor's Field Service Representative (FSR) shall

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advise and assist Government personnel with operation, maintenance and repair of test vehicles and any other equipment furnished under this contract. The FSR shall report to the test site(s) coincident with delivery of vehicle and shall remain for the duration of the test(s). Technical assistance shall also consist of observation and assisting in assessment of problems. The technical assistance shall also include preliminary investigation of test failures and the performance of on-site repair, as requested by the Government, as well as provide spare/repair parts as required.

E.9.3.1 RESERVED.

E.9.4 TEST DEFICIENCIES.

E.9.4.1 DEFINITIONS:A failure is defined as an event, or state, in which the system or a component of the test vehicle does not or would not perform as specified in the vehicle PD. A defect is defined as a nonconformance to a technical requirement. Defects are classified as critical, major and minor, as defined in the PD and Failure Definition and Scoring Criteria (FDSC).

E.9.4.2 IMPACT OF TEST FAILURES/DEFECTS. In the event of vehicle/component system test failures, the Government reserves the right to retest the vehicle/system upon correction of the defect(s) by the contractor. Corrective action must be to the complete extent and duration specified in the test program or to such lesser extent as the PCO shall consider appropriate in his/her sole discretion. The Government shall have the right to extend the specified test period due to contractor induced delays to the test program as a result of vehicle defects, retest of contractor's corrective action, or failure to adequately or timely furnish parts support. Extensions to the test period as a result of contractor induced delays shall be at no additional cost to the Government. The Contractor shall bear all costs for test delays which are its responsibility and shall reimburse the Government for its additional costs attributable to such Contractor induced delays in the conduct of the tests.

E.9.4.3 TEST INCIDENT REPORT (TIR)/FAILURE ANALYSIS & CORRECTIVE ACTION REPORT (FACAR).

E.9.4.3.1 PROCESSING TIRs AND FACARs. The Government will provide the Contractor a copy of all TIRs generated as a result of Government testing. One information copy will be provided to the contractor technical representative at the test site, and one official copy provided by the PCO or COR to the contractor program office. Only TIRs affecting contractual compliance or performance will require a FACAR. The Government, within 20 days after receipt of the TIR, will forward them to the contractor electronically and inform him of those TIRs that will require a FACAR.

E.9.4.3.2 Upon receipt of the Government's request for failure analysis, the Contractor shall prepare and submit a FACAR to AMSTA-DSA-LV-P, electronically, in contractor format, per CDRL A007. The time frames specified for Critical, Major and Minor TIRs in E.9.4.3.3 and E.9.4.3.4 shall apply. The following information shall be required on the FACAR as a minimum:

- a. Failure analyses report number.
- b. Contract number.
- c. Equipment title.
- d. Serial number of affected equipment.
- e. Date of failure.
- f. Type of Test that failed.
- g. Effect on equipment.
- h. Total test time at failure.
- i. Failure analysis results.
- j. Statement as to whether this was a pattern failure.
- k. Corrective action to be taken.
- l. Measures to prevent future failures.

E.9.4.3.3 INTERIM FACAR RESPONSES. The contractor shall provide interim FACARs electronically to AMCPM-DSA-LV-P (Ref. E.9.4.3.2) within the following specified timelines:

- Critical Test Incident - 48 hours after receipt of TIR.
- Major Test Incident - Within 10 days receipt of TIR.
- Minor Test Incident - 30 days No interim response required.
- Info. Test Incident - 30 days, if required.

E.9.4.3.3.1 All interim responses shall provide the status of the contractor's investigation, and proposed date for submission of the final response. The interim status shall be updated every 14 days subsequent to the initial submission. All contractor requests to extend or modify the time period for subsequent interim responses or final response must be reviewed and approved by the PM, LAV Corrective Action Review Board (CARB) before an extension can be authorized.

E.9.4.3.4 FINAL RESPONSES. Final responses are required for all TIRs (Critical, Major, and Minor), within 30 calendar days after receipt unless modified as stated in E.9.4.3.3.1. The contractor shall indicate the corrective action status, either "Final" or "Interim" on each FACAR. The CARB will evaluate each FACAR and determine if it is closed or open. The PCO or his/her representative shall notify the contractor if further information or action is required or if the TIR is closed.

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E.9.4.3.5 CORRECTION OF DEFICIENCIES. The Contractor shall be responsible for the correction of all deficiencies identified during Government Development Testing/Operational Testing (DT/OT) at no increase in estimated cost or price. A deficiency is defined as a failure to achieve the requirements of the Purchase Description. Correction of these deficiencies shall include: Preparation of a Class I Engineering Change Proposal (ECP) to incorporate the correction into the configuration of the affected vehicles, in accordance with the requirements for ECPs in Section C; and implementation/installation of retrofit kits onto the Phase I vehicles.

E.9.4.3.6 Government approval of a COD ECP does not relieve the contractor of the responsibility for meeting the requirements of this contract. The Government retains the right to retest the Contractor's correction/ECP change to verify that it corrects the deficiency. If it is determined that the system is still deficient, the Contractor will be required to correct the deficiency in accordance with the requirements of this provision. The Contractor's COD responsibility is not fulfilled until all test deficiencies are resolved to ensure compliance with the requirements of the Purchase Description

PHASE II - PRODUCTION OPTIONS

E.10 LAV SLEP INSPECTION AND ACCEPTANCE.

E.10.1 RESERVED

E.10.2 RESERVED

E.10.3 FIRST ARTICLE APPROVAL - GOVERNMENT TESTING ALTERNATIVE I AND ALTERNATIVE II - 52.209-4 (SEP 1989)

E.10.4 INSPECTION AND ACCEPTANCE POINT (UPGRADE KITS): Origin

E.10.4.1 The contractor shall conduct Procurement Quality Assurance Inspections demonstrating conformity of each SLEP Vehicle and or each LAV SLEP upgrade Kit as well as other deliverable components using the applicable drawings and specifications, QCI&TP and Final Inspection Record (FIR) at the following locations:

Contractor's Plant

Name

Address

Sub-contractor's Plant

Name

Address

E.10.4.2 INSPECTION AND ACCEPTANCE POINT (INTEGRATION OF SLEP UPGRADE KITS): Destination

E.10.4.2.2 The contractor shall conduct a final inspection of each LAV SLEP Vehicle after they install the SLEP upgrade kits. This inspection shall be IAW the requirements of the LAV SLEP FIR. Vehicle acceptance shall be at the place of kit integration, only after successful integration of kit components and completion of the FIR.

E.10.5 INSPECTION AND ACCEPTANCE POINT. The inspection and acceptance of any data delivered under this contract shall be at destination. Destination shall be those addresses set forth in the DD Form 1423 for each deliverable data item.

E.10.6 QUALITY SYSTEM AUDITS/INSPECTIONS. Reference paragraph E.4 and E.4.1.

E.10.7 INSPECTION EQUIPMENT. Reference paragraph E.5.

E.10.8 DRAWINGS FOR INSPECTION. Reference paragraph E.6.

E.10.9 VISUAL INSPECTION CRITERIA FOR STEEL WELDMENTS. See paragraph E.7 and E.7.1.

E.10.10 SECTION 4 OF THE PURCHASE DESCRIPTION. Section 4 (inclusive), "Quality Assurance Provisions", of the Purchase Description (Attachment 1) constitutes quality assurance and testing requirements along with those requirements set forth in this contract.

E.10.10.1 The contractor shall prepare certifications for materials/components as identified by the LAV-SLEP Purchase Description to verify that the requirements of those particular material/components are met. These certifications must be substantiated with documented test reports, performance data, analytical data or vendor reports. Such documentation must be affixed to the certification. The contractor shall provide each certification to the Government at the time of FPVI (ref. E.11.2) for review and approval. In the

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event that any certifications are disapproved by the government, the contractor shall conduct additional tests/inspections or provide additional documentation at no additional cost to the Government.

E.10.11 INSPECTION OF GOVERNMENT FURNISHED VEHICLES/MATERIAL/EQUIPMENT.

E.10.11.1 The Contractor shall be responsible to inspect each vehicle prior to installing any SLEP upgrade in order to document the vehicle condition upon receipt. This inspection shall be performed IAW the LAV Automotive/Hull Inspection Checklist, provided as GFI. All deficiencies discovered during vehicle inspection shall be documented on the Inspection Checklist (Deficiency Sheet) and submitted to the Government on a Quality Deficiency Report (SF form 368), within 15 days from the time of inspection IAW ELIN A010. This inspection shall document the condition of each Government Furnished LAV upon arrival and establish the vehicle baseline for acceptance after installation of SLEP upgrade kits. All reported deficiencies discovered prior to SLEP integration are the responsibility of the Government.

E.10.11.2 The Contractor shall be supplied GFM/GFE as delineated in Attachment 2. All GFM/GFE received shall be inspected upon receipt to document its condition and the proper quantity was received. All deficiencies discovered during this inspection shall be documented on a Quality Deficiency Report (SF form 368) and submitted to the Government, within 15 days from the time of inspection IAW ELIN A010. Handling of all GFM/GFE shall be in accordance with the Contractor's Quality Program (Section C.4.1). The Government will be responsible to correct all deficient GFM/GFE unless the deficiency was caused by the contractor as part of the SLEP integration process.

E.10.12 FINAL INSPECTION OF PRODUCTION VEHICLES. The Contractor shall perform final inspection of each LAV SLEP upgraded vehicle after installation of SLEP upgrade kits, including test vehicles, IAW the requirements specified or referenced in paragraph 4.5 (Inclusive), "Quality Conformance Inspection" (QCI) of the LAV-SLEP PD (Attachment 1). The final inspection shall be conducted utilizing the Contractor prepared FIR delineated in Section C.24.1 of this contract and shall be conducted either at the Contractor's facility or at the locations(s) where the Contractor installs the SLEP Upgrade Kits. Deficiencies detected during the final inspection by the Contractor or Government shall be described in writing on the deficiency sheet attached to the FIR and shall be corrected by the Contractor prior to final acceptance by the Government. If a trend of quality/workmanship or integration deficiencies become apparent through QCI, the Government has the right to stop the installation of kits in the remaining fleet of vehicles until the contractor corrects all the reported deficiencies.

E.10.12.1 FINAL INSPECTION OF SLEP UPGRADE KITS. The Contractor shall perform a complete inventory and final inspection of each SLEP upgrade kit prior to delivery, utilizing the Contractor prepared Quality conformance Inspection & Test Procedures (QCI&TP) delineated in Section C.24.2. The final inspection shall be conducted utilizing all applicable drawings, specifications, and packaging lists for each SLEP component. Deficiencies detected during the final inspection of each kit, either by the Contractor or Government shall be described in writing and corrected by the Contractor prior to final acceptance of each kit. If a trend of quality/workmanship deficiencies becomes apparent as a result of kit inspections, the contractor shall correct these deficiencies in all kits not yet accepted by the Government.

E.10.13 IN-PROCESS INSPECTION. The Government reserves the right to inspect end items or any parts/components during all manufacturing processes and reject such material that does not conform to either Government or contractor drawing/specifications. Such inspections by the Government may be performed at the contractor's predetermined inspection stations. All deficiencies detected during any contractor or Government inspection (end item or in-process) shall be corrected by the contractor at no cost to the Government. During any Government inspection, the contractor shall provide assistance upon request.

E.10.14 ARMOR STEEL BALLISTIC TESTING. If Armor Plate (MIL-A-46100 High Hard Steel (HHS) or MIL-A-12560 Rolled Homogeneous Armor) or equivalent is procured under this contract, the contractor shall be required to provide one plate of each thickness (12"x36") to the Government for ballistic testing prior to its use in production. The PCO shall provide the contractor with the name and address of the Government test site for ballistic testing 60 days after contract award. No armor steel shall be used in LAV SLEP vehicles until the Government has satisfactorily tested it.

E.10.14.1 RETEST OF FAILED BALLISTIC TEST SAMPLES. If a test sample fails ballistic testing, two retest samples shall be submitted from the same lot for ballistic testing. If the second sample passes ballistic testing the lot is considered acceptable. Failure of the retest sample shall be cause to reject the entire lot.

E.10.15 CHANGE OF SUPPLIERS. If the Contractor changes sources of supply for any vehicle components/material that affects provisioned items, technical publications, certifications, or critical safety items, the Government reserves the right to require the Contractor to conduct another component level First Article Test. If required, this testing shall be successfully accomplished at contractor's expense prior to acceptance of any item containing the component furnished by the different supplier.

E.10.16 QUALITY DEFICIENCY REPORTS (CONTRACTOR SUPPLIED ITEMS).

E.10.16.1 The Contractor shall investigate, provide failure analysis, and propose corrective action to all Quality Deficiency Reports (QDRS - SF 368) generated by the user. QDR investigations and failure analysis responses shall be limited only to those SLEP components/enhancements, any items/components that fail as a result of the SLEP components/enhancements or that fail due to the integration process under this contract. The Contractor shall conduct QDR investigations for a period of two years after the last vehicle is delivered. All QDRs will be submitted for response through the PCO. The Contractor shall notify the Government (AMSTA-DSA-

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LV-P), within 10 days from receipt of each QDR, if an exhibit is required for failure analysis. The exhibit request shall include detailed instructions as to where the exhibit is to be sent along with a point of contact. Upon completion of the Contractor's investigation, a QDR investigation report shall be prepared and provided (in contractor format), outlining the results of their investigation, summary of any failure analysis performed, and proposed corrective action to AMSTA-DSA-LV-P, IAW CDRL A008. All QDR responses and QDR investigation reports shall be provided to the Government within the following time frames:

- | | | | |
|----|--------|---|---|
| a. | Cat I | - | 20 days w/o exhibit or 20 days after receipt of requested exhibit |
| b. | Cat II | - | 30 days w/o exhibit or 30 days after receipt of requested exhibit |

E.10.16.2 In the event that more time is required to complete a QDR investigation, the Contractor may request that a one-time extension from the PCO be granted. This request must be submitted to the PCO, and shall include a complete summary of the work performed to date, and justification for the requested extension. In no event shall any QDR response due date be extended beyond an additional 30 days.

E.11 TEST REQUIREMENTS.

E.11.1 First Article Approval - Government Testing. The Provisions entitled, "First Article Approval-Government Testing (E.10.3) are applicable to this contract. The First Article requirements (if the production option is exercised) are a First Production Vehicle Inspection and a Product Verification Test.

E.11.1.1 The Government, at its discretion, may "Conditionally Accept" production SLEP vehicles and/or upgrade kits prior to satisfactory completion of the first article requirement in order to meet the vehicle delivery schedule. The contractor shall be responsible for correction of all defects on SLEP upgrade kits not yet delivered as well as on SLEP upgraded vehicles that were conditionally accepted by the Government prior to satisfactory completion of the first article requirement regardless of the conditionally accepted vehicle's geographical location. Final acceptance by the Government of such conditionally accepted SLEP upgraded vehicles or kits shall be made upon satisfactory completion of the first article requirement and when all defects on the conditionally accepted vehicles are corrected to the satisfaction of the Government.

E.11.1.2 In the event that during the course of the contract, the place of manufacture of end items changes geographical locations, the Government at its discretion may elect to have the contractor repeat all or portions of the first article requirements.

E.11.2 FIRST PRODUCTION VEHICLE INSPECTION (FPVI).

E.11.2.1 Pursuant to the General Provision entitled, "First Article Approval Government Testing" of this contract, the first production vehicle of each variant type shall be subjected to inspections by the Contractor and Government. These inspections shall be in accordance with the provisions contained in this contract and as stated or referenced in the LAV SLEP Purchase Description (Attachment 1). At least 20 calendar days prior to submission of the FPVI vehicle of each variant type for final inspection, the Contractor shall furnish written notice to the PCO of the time and location of the inspection, so that Government representatives may witness and participate in the inspection(s). The contractor shall make available to the Government any records of inspection and tests that have previously been conducted on the FPVI vehicle and their components.

E.11.2.2 FPVI REPORT. An FPVI report shall be prepared and submitted to Government, IAW CDRL A005. The test report shall be prepared in Contractor format and shall identify all tests and inspections conducted and report all deficiencies detected. The report shall specify the corrective action taken for each reported deficiency and the action taken to preclude this discrepancy from being repeated on follow-on production vehicles.

E.11.2.3 FPVI APPROVAL. The PCO shall, by written notice within 20 calendar days after receipt of the FPVI report, conditionally approve or reject the FPVI vehicle. The notice of approval or conditional approval will not relieve the contractor from complying with all requirements of the LAV SLEP PD and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor for the applicable first production vehicle. A notice of disapproval shall explain the reasons for the disapproval.

E.11.2.3 FPVI RE-INSPECTION. If FPVI is disapproved by the Government, the Contractor shall make any necessary changes, modifications, or repairs to the first production vehicle. Once the Contractor has taken corrective action, the Government has the right to repeat any or all of the first production vehicle inspections. The Government shall have the option to select another production vehicle to repeat any or all of the first production vehicle inspections in lieu of the original first production vehicle. Upon completion of any repeat inspection(s), the contractor shall again submit an inspection report. The contractor shall bear the responsibility for delays resulting from additional first production vehicle inspection(s). Contractor failure to complete FPVI in a timely manner shall constitute failure to make delivery within the meaning of the "Default" article of the contract and subparagraph (d) of the contract's "First Article Approval - Government Testing" clause.

E.11.2.4 FPVI VEHICLE STANDARD. After completion of FPVI, the First Production Vehicle of each variant type may, at the discretion of the Government, be retained as the manufacturing standard until completion of the production run and submitted as the last unit to be delivered under the contract. All configuration changes as a result of drawing and/or specification modifications taking place after

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the FPVI shall be made to the First Production Vehicle so it will be representative of the current configuration throughout the life of the contract.

E.11.3 PRODUCTION VERIFICATION TESTING (PVT).

E.11.3.1 After successful completion of FPVI and Pursuant to the General Provision entitled, "First Article Approval Government Testing" and Section E.10.3 of this contract, three (3) LAV-25 SLEP vehicles shall be selected after all SLEP upgrade kits have been installed and undergo PVT. PVT verifies that the Contractor's production process is in control and will not degrade the vehicle from its original performance characteristics as described in the LAV SLEP PD and the FOLAV-DPS. Subsequent PVTs may also be conducted on two (2) each of the remaining LAV SLEP Variant types (optional) after successful completion of FPVI of each variant type. The PVT vehicles shall be subject to PVT as follows:

Vehicle	Quantity	Mileage	Duration
LAV-25	3	(2) 6,000 ea. (1) Performance	180 Working Days
LAV-MRV(OPTIONAL) PVT			
LAV-CC	2 ea.	(1) 6,000	150 Working Days
LAV-AT or LAV-25 (TOW)		(1) Performance	Per Variant
LAV-L			
LAV-R			
LAV-M			
LAV-AD			
MEWSS			

The PVT shall be conducted by the Government at any one or all of the following Government Test Sites: APG, YPG, EPG or NATC. The final test locations shall be identified through the TIPT process and described in the Detailed Test Program Plan. Such testing shall be in accordance with the LAV SLEP Purchase Description and a Government prepared test program plan. The extent of testing may be reduced at the discretion of the Government. Final acceptance of the PVT vehicles shall not occur until testing has been completed and all test deficiencies corrected to the satisfaction of the Government. A Government prepared test program plan will be provided to the Contractor for information purposes prior to the start of PVT.

E.11.3.2 PVT starts with the first day of performance or RAM testing. The test day count will be stopped only by a delay in repair parts replacement by the Contractor. Any delay over 48 hours shall be considered a test stoppage unless authorized by the Government. The Contractor shall not be charged for a test stoppage for delays in testing due to crew or maintenance error, gross negligence, or abuse. The test duration specified in E.11.3.1 is based on working days 5 days per week.

E.11.3.3 The test vehicles shall be equipped with Government furnished test measurement instruments. The instruments shall provide daily recordings of the engine RPM, vehicle speed, distance traveled, and lateral G-forces in relation to the time of day. Daily recordings shall be made throughout Government testing at all test sites. Data obtained from this test instrumentation will be made available to the Contractor on an as required basis.

E.11.4 CORRECTION OF DEFICIENCIES - PHASE II. The Contractor shall be responsible for the correction of all deficiencies identified during Government First Article Testing at no increase in cost/price. A deficiency is defined as a failure to meet the requirements of the Purchase Description. Correction of these deficiencies shall include: Preparation of the ECP after Government approval, including:

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*\'b7Documentation changes/updates (ILS corrections, TDP updates, MIs, etc.) in accordance with the Configuration Management provisions in Section C;
Acquisition, delivery, and installation of ECP retrofit kits onto all affected vehicles (either conditionally accepted or "in-process" prior to acceptance).
Revision of upgrade kits, either conditionally accepted or in-process to reflect the configuration changed effected by the ECP.

E.11.4.1 Government approval of a COD ECP does not relieve the Contractor of the responsibility for meeting the requirements of this contract. The Government retains the right to retest the Contractor's correction/ECP change to verify that it corrects the deficiency. If it is determined that the system is still deficient, the Contractor will be required to correct the deficiency in accordance with the requirements of this provision. The Contractor's COD responsibility is not fulfilled until all test deficiencies are resolved to ensure compliance with the requirements of the Purchase Description. If the Contractor elects to have Government personnel perform any of the kit installation effort at the field units under the "Option 2" approach (ref. C.21), the Contractor shall maintain responsibility for correcting any deficiencies related to the Government installation effort. Per C.21, the Contractor shall not be held responsible for correcting any vehicle defects unrelated to the installation effort or the interface with the upgrade kits.

E.11.5 CONTRACTOR TEST SUPPORT. All of the requirements of paragraph E.9.3 shall apply to Phase II. .

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E.11.6 TEST DEFICIENCIES. All of the requirements of paragraph E.9.4 (inclusive) shall apply to Phase II with the exception of Correction of Deficiencies (COD). The COD requirements of paragraphs E.11.4 shall apply to Phase II.

E.11.7 TEST MEETINGS. The Government will conduct approximately 4 Test Integrated Process Team meetings (TIPT) a year approximately 2 Scoring and Assessment Conferences in support of the PVT for each variant. The duration of each meeting or conference will last approximately three days and the Government will notify the Contractor prior to the start of each conference of the date and location. All of the requirements of paragraph E.9.2 (inclusive) shall apply to PVT.

*** END OF NARRATIVE E 001 ***